Cumulative Assessments on UNIT 9

Cumulative Assessment 8 Till lessons (1 & 2) unit 9

1. Choose the correct answer from these ones.

a. If $\frac{4}{7} \times 14 = a \times 4$, then a = ________

A. 3 B. 7 C. 14 D. 2

b. The like denominator of $\frac{3}{7}$ and $\frac{1}{14}$ is ________

A. 3 B. 7 C. 14 D. 1

c. $2\frac{1}{4} \times \frac{13}{14}$ is ________ $2\frac{1}{4}$

A. less than B. greater than C. equal to

d. If $7\frac{1}{2} \times \frac{4}{a}$ is greater than $7\frac{1}{2}$, then a may be ________

A. 3 B. 4 C. 5 D. 6

e. If $4\frac{m}{17}$ is about 4 , then m may be ________

A. 2 B. 8 C. 10 D. 17

f. $\frac{3}{4} + \frac{1}{4} =$ ________

A. $\frac{4}{8}$ B. $\frac{3}{16}$ C. $\frac{8}{8}$ D. $\frac{31}{44}$

2. Complete the following.

a. $1\frac{1}{4} - \frac{5}{8} =$ ________

b. If $\frac{4}{5} \times b = \frac{4}{5} + \frac{2}{5}$, then b = ________

c. $6 \times 4 + \frac{2}{3} \times 4 =$ ________ $\times 4$

d. The opposite area model represents ________ × ________

$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$
$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$
$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$

e. $\frac{7}{10} - \frac{3}{10} =$ ________

f. $1 + \frac{1}{3} + \frac{1}{2} =$ ________

3. a. Write at least three different multiplication expressions that have the same product as $\frac{6}{7} \times 10$.

____

b. Wael spends $\frac{3}{7}$ of his money on candy and $\frac{1}{5}$ of his money on toys and saves the left money.

What fraction of money does Wael save ?

____

c. Ahmed studied Math for $2\frac{1}{4}$ hours and science for 45 minutes.

How many hours did Ahmed study in all ?

____

Cumulative Assessment 9 Till lessons (3 & 4) unit 9

1. Complete the following.

a. $\frac{2}{3} \times$ ________ $= \frac{8}{15}$

b. $\frac{4}{5} + \frac{7}{6}$ is estimated as ________ + ________ = ________

c. If $\frac{4}{7} \times n = \frac{4}{7} + \frac{4}{7} + \frac{2}{7}$, then n = ________

d. $0.5 \times 4 \times \frac{3}{7} =$ ________

2. Using the area models to evaluate each of the following.

a. $\frac{3}{5} \times \frac{1}{2}$

b. $1\frac{1}{3} \times 3$

c. $\frac{1}{4} \times \frac{1}{4}$

d. $\frac{3}{4} \times \frac{2}{2}$

3. Choose the correct answer from these ones.

a. The fraction $\frac{2}{4}$ is equivalent to ________

A. $\frac{12}{14}$ B. $\frac{6}{12}$ C. $\frac{6}{7}$ D. $\frac{20}{45}$

b. If $X + 3\frac{1}{8} = 5\frac{3}{8}$, then X = ________

A. $8\frac{1}{2}$ B. $2\frac{2}{16}$ C. $4\frac{2}{8}$ D. $2\frac{1}{4}$

c. The product of $\frac{12}{13} \times 8$ is equivalent to ________

A. $\frac{3}{13} \times 24$ B. $\frac{8}{12} \times 13$ C. $\frac{6}{13} \times 16$ D. $\frac{12}{8} \times 13$

d. $2 \times 5 + \frac{2}{5} \times 5 =$ ________ $\times 2$

A. 2 B. $\frac{2}{5}$ C. 5 D. 6

4. Answer the following problems.

a. Sameh and Wael bought some cookies. Sameh ate $\frac{3}{8}$ of them and Waël ate $\frac{1}{3}$ of them. the left is 14 cookies.

What is the number of cookies did Sameh and Wael buy ?

____

____

b. Wafaa's flower garden consists of $\frac{2}{9}$ cornflowers and $\frac{2}{3}$ roses. The rest of the garden's area is filled with grass.

What fraction of the garden's area is grass ?

____

Cumulative Assessment 10 Till lessons (5 to 7) unit 9

1. Choose the correct answer from these ones.

a. $2\frac{3}{4} \times 1\frac{1}{2} =$ ....

A. $2\frac{3}{8}$ B. $3\frac{3}{8}$ C. $4\frac{1}{8}$ D. $4\frac{1}{4}$

b. $\frac{5}{6} \times$ .... $= 1$

A. $\frac{5}{6}$ B. $\frac{4}{5}$ C. 1 D. $1\frac{1}{5}$

c. $3\frac{1}{4} -$ .... $= 2\frac{1}{2}$

A. $1\frac{1}{2}$ B. $\frac{4}{3}$ C. $\frac{3}{4}$ D. $\frac{13}{4}$

d. $\frac{2}{5} + \frac{3}{8} + 1 =$ ....

A. $1\frac{31}{40}$ B. $1\frac{5}{13}$ C. $1\frac{5}{40}$ D. $1\frac{6}{40}$

2. Multiply each of the following and write the product in its simplest form.

a. $2\frac{1}{2} \times 1\frac{1}{2}$ [Using area model]

b. $4\frac{1}{3} \times 3$ [Using distributive property]

c. $3\frac{1}{5} \times 1\frac{1}{4}$ [Using improper fraction]

3. Complete the following.

a. $3\frac{1}{4} \times 1\frac{1}{2} = [3 +$ .... $] \times [\frac{1}{2} +$ .... $]$

b. .... $\times 1\frac{1}{3} = \frac{9}{2} \times \frac{4}{3}$

c. If $3\frac{1}{5} + n = 4\frac{2}{3}$, then $n =$ ....

d. If $\frac{5}{7} = \frac{X}{28}$, then $X =$ ....

4. Put (<, > or =).

a. $2\frac{1}{8} \times \frac{7}{9}$ ◯ 1

b. $\frac{5}{7} \times \frac{3}{3}$ ◯ 1

c. $1\frac{1}{2} \times 1\frac{1}{2}$ ◯ $2\frac{1}{4}$

d. $6\frac{1}{4} \times \frac{3}{4}$ ◯ $6\frac{1}{4}$

Cumulative Assessment 11 Till lesson (8) unit 9

1. Complete the following.

a. $2\frac{2}{3} - 1\frac{1}{8} =$ ______

b. $1\frac{1}{8} \times 2\frac{2}{3} =$ ______

c. $1\frac{1}{8} + 2\frac{2}{3} =$ ______

d. $1\frac{1}{8} \times 2 =$ ______

e. $2\frac{3}{8} - 1\frac{5}{8} =$ ______

f. $1\frac{1}{3} - \frac{5}{8} =$ ______

2. Answer the following problems.

a. Petra lives $\frac{3}{4}$ km. from school. Paula lives $1\frac{1}{3}$ times as far away from school as Petra.

How far from school does Paula live ?

______

b. Pierre had $10\frac{1}{2}$ L.E. in his pocket and $15\frac{3}{4}$ L.E. in his bank.

How much money did he have ?

______

______

3. Choose the correct answer from these ones.

a. By using the fraction tiles , the sum of $\frac{1}{3} + \frac{1}{4}$ equals ______

A. $\frac{2}{7}$ B. $\frac{7}{12}$ C. $\frac{2}{3}$ D. $\frac{1}{7}$

b. The mixed number $3\frac{1}{4}$ can be regroup as ______

A. $3 + \frac{1}{4}$ B. $4\frac{1}{3}$ C. $2\frac{5}{4}$ D. $\frac{13}{4}$

c. $\frac{25}{4}$ is equivalent to ______

A. $2\frac{5}{4}$ B. $5\frac{2}{4}$ C. $6 + \frac{1}{4}$ D. $4 + \frac{1}{6}$

4. Answer the following.

a. Youssef's dad said he will give him $7\frac{1}{2}$ L.E if he works one hour.

How much will he give him for 3 hours and 15 minutes ?

______

b. Write two different multiplication expressions that have the same product as $\frac{12}{13} \times 16$

______

Cumulative Assessment 12 Till lessons (9 & 10) unit 9

1. Choose the correct answer from these ones.

a. 7 bales of cotton shared by 3 manufacturers represented by ______

A. $3 \div 7$ B. $7 + 3$ C. $7 - 3$ D. $7 \div 3$

b. All the following expressions are equal except ______

A. $37 \div 5$ B. $7\frac{2}{5}$ C. $5\frac{2}{7}$ D. $6\frac{7}{5}$

c. $5\frac{X}{24}$ is slightly greater than $5\frac{1}{2}$, then X may be ______

A. 23 B. 9 C. 11 D. 13

d. If $3\frac{1}{4} + k = 7$, then $k =$ ______

A. $3\frac{1}{4} + 7$ B. $7 - 3\frac{1}{4}$ C. $7\frac{1}{4} - 3$ D. $7\frac{1}{4} + 3$

e. If $13 \div 4 = a$, then $a =$ ______

A. $4\frac{1}{4}$ B. $3\frac{1}{4}$ C. $4\frac{1}{3}$ D. $4 \div 13$

f. $1\frac{1}{3} \times \frac{6}{5}$ is greater than $1\frac{1}{3}$ because ______

A. $\frac{5}{6} < 1$ B. $\frac{6}{5} > 1$ C. $1\frac{1}{3} > 1$ D. $1\frac{1}{3} < 1$

2. Complete the following.

a. $2\frac{1}{3}$ hours = ______ hours and ______ minutes.

b. $13 \div 5 =$ ______ $+ 2$

c. If we divided 4 pizza among 3 persons, the share of each one is ______

d. $2\frac{1}{3} \times 6 = (2 \times 6) + ($ ______ $\times 6)$.

e. If $17 \div 5 = 3\frac{2}{5}$, then the divisor is ______

f. $\frac{12}{13} \times 8 = \frac{24}{13} \times$ ______

3. a. The price of 9 notebooks is 55 L.E.

Find the price of each notebook.

______

b. The price of each pen is $2\frac{1}{2}$ L.E.

Find the price of 6 pens.

______

Cumulative Assessment 13 Till lessons (11 & 12) unit 9

1. Use the area model to find the result of :

a. $\frac{1}{4} \div 3 =$ ________

b. $1\frac{1}{3} \times 2\frac{1}{2} =$ ________

c. $4 \div \frac{1}{2} =$ ________

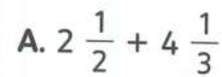
d. $2\frac{1}{2} - 1\frac{1}{4} =$ ________

2. Choose the correct answer from these ones.

a. If $\frac{1}{5} \div a = \frac{1}{10}$, then a = ________

A. $\frac{1}{2}$ B. 5 C. $\frac{1}{5}$ D. 2

b. The opposite number line is used to solve the problem ________



A. $2\frac{1}{2} + 4\frac{1}{3}$ B. $4\frac{1}{3} - 2\frac{1}{2}$

C. $2\frac{1}{3} + 4\frac{1}{2}$ D. $4\frac{1}{2} - 2\frac{1}{3}$

c. How many thirds are there in 2 ?

A. 5 B. 2 C. 6 D. $\frac{3}{2}$

d. If $5\frac{1}{3} = X \div 3$, then X = ________

A. 5 B. 51 C. 16 D. 15

3. Complete the following.

a. $5 \div \frac{1}{7} =$ ________

b. $5\frac{1}{7} = \frac{\quad}{7}$

c. The simplest form of $\frac{24}{18}$ is $\frac{a}{3}$, then a = ________

d. $\frac{1}{7} \div 5 =$ ________

4. Martin spends $\frac{1}{3}$ of his money to buy food and $\frac{1}{2}$ of it to buy toys.

What fraction does the left money represent ?

____

Cumulative Assessment  Till lesson (13) unit 9

1. Complete the following.

a. If $\frac{4}{7} \times a = \frac{4}{7} + \frac{2}{7}$, then a = ________

b. $5 \div \frac{1}{2} =$ ________

c. If $3\frac{1}{2} \times 4 = (3 \times 4) + (b \times 4)$, then b = ________

d. The number of thirds in 5 is ________

e. $1\frac{1}{2} \times \frac{1}{3} =$ ________

f. 2 hours and 15 minutes = ________ minutes.

2. Choose the correct answer from these ones.

a. $\frac{1}{3} \div 5 =$ ________

A. $\frac{5}{3}$ B. $\frac{3}{5}$ C. 15 D. $\frac{1}{15}$

b. The number of fifths in 4 is ________

A. 9 B. 1 C. 20 D. $\frac{5}{4}$

c. $1\frac{1}{2}$ day = ________ hours.

A. $\frac{3}{2}$ B. 24 C. 36 D. $\frac{2}{3}$

d. The LCM of the denominators of $\frac{3}{7}$ and $\frac{1}{3}$ is ________

A. 10 B. 4 C. 21 D. $\frac{7}{3}$

e. The price of 7 pens is 36 pounds , then the price of each pen = ________ pounds.

A. 43 B. 29 C. $7\frac{1}{5}$ D. $5\frac{1}{7}$

f. $2\frac{5}{6} = 1\frac{a}{6}$ by regrouping , then a = ________

A. 5 B. 11 C. 6 D. 2

3. How many $\frac{1}{4}$ cup are there in 7 cups of chocolate ?

____

4. For each problem , Identify which operation (addition , subtraction , multiplication or division) , then answer the question.

a. $\frac{3}{4}$ of the teachers staff are male. How many of the staff are female ?

____

b. Victor has 7 liters of mango juice. If he drinks $\frac{1}{4}$ Litre of juice each day. How many days will it take him to finish all the juice ?

____

Cumulative Assessment 16 Till lesson (2) unit 10

1. Choose the correct answer from these ones.

a. If m (∠ X) = 40° , m (∠ Y) = 90° and m (∠ Z) = 50° , then the triangle is ________ – angled triangle.

A. Acute B. Right C. Obtuse

b. Any triangle has at least ________ acute angles.

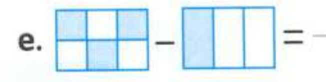
A. 2 B. 3 C. 4 D. 5

c. The pentagon has ________ sides.

A. 3 B. 4 C. 6 D. 5

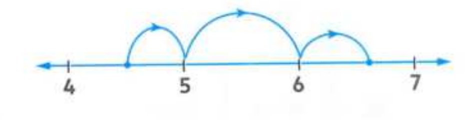
d. If AB = BC = AC , then the triangle ABC is ________ triangle.

A. Equilateral B. Isosceles C. Scalene

e.  = ________

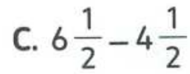
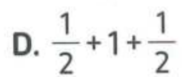
A. $\frac{1}{3}$ B. $\frac{5}{6}$ C. $\frac{1}{6}$ D. 1

f. The opposite number line represents ________



A. $6\frac{1}{2}+4\frac{1}{2}$ B. $1+\frac{1}{2}+\frac{1}{2}$

C. $6\frac{1}{2}-4\frac{1}{2}$ D. $\frac{1}{2}+1+\frac{1}{2}$

2. Complete the following.

a. $\frac{1}{3} \div a = \frac{1}{6}$, then a = ________

b. The right-angled triangle has two acute angles and ________ angle.

c. The ________ is a parallelogram with 4 right angles.

d. The rhombus with 4 right angles is called ________

e. $\frac{1}{3} - a = \frac{1}{6}$, then a = ________

f. $3\frac{1}{2} + 2\frac{1}{3} =$ ________ g. 40 minutes = ________ hour.

3. a. How many fourths in the number 3 ?

____

b. Sohila likes chocolate. One day , she bought a chocolate and ate $\frac{1}{3}$ of it. Next day. she ate $\frac{1}{5}$ of it. Find the fraction of the left part.

____

4. Paula is making a design using a polygon that has two equal sides and the third side are different what shape is using ?

____

Cumulative Assessment 17 Till lessons (3 to 5) unit 10

1. Complete the following.

a. The area of rectangle of dimensions $2\frac{3}{4}$ m and $3\frac{1}{2}$ m is ________

b. $1 - \frac{—}{—} = \frac{1}{5}$

c. If the area of rectangle is $\frac{1}{3} \times a = \frac{2}{15}$, then a = ________

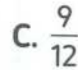
d. $3\frac{1}{2} \times 1\frac{1}{3} =$ ________

e. In the triangle ABC , m (∠ A) = m (∠ B) = 70° and m (∠ C) = 40° , then the triangle is ________ angled triangle.

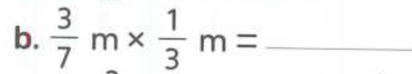
2. Choose the correct answer from these ones.

a. The opposite area model represents ________ .

A. $\frac{2}{3} \times \frac{1}{4}$ B. $\frac{1}{2} \times \frac{3}{4}$



C. $\frac{9}{12}$ D. $\frac{3}{12}$



b. $\frac{3}{7}$ m $\times \frac{1}{3}$ m = ________

A. $\frac{3}{21}$ m B. $\frac{1}{7}$ m^2 C. $\frac{4}{10}$ m^2 D. $\frac{1}{7}$ cm^2

c. 90 seconds = ________ minutes.

A. 90 B. $1\frac{1}{4}$ C. $1\frac{1}{2}$ D. $1\frac{1}{3}$

d. The triangle of side lengths are 5 cm , 6 cm , 7 cm is called ________ triangle.

A. Equilateral B. Isosceles C. Scalene

e. If $\frac{1}{2} + a = \frac{7}{8}$, then a = ________

A. $\frac{6}{6}$ B. $\frac{3}{8}$ C. $\frac{8}{10}$ D. $1\frac{1}{8}$

3. Which is greater in area ?

A rectangle of length $2\frac{1}{2}$ cm and width $3\frac{1}{3}$ cm or another rectangle of dimensions $3\frac{1}{2}$ cm and $2\frac{1}{3}$ cm

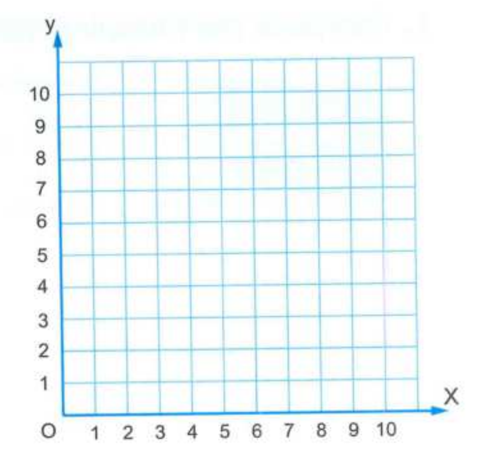
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4. A house has a door that is $1\frac{1}{2}$ m wide and $2\frac{1}{2}$ m long.
What is the area of the door in square meters ?

____

Cumulative Assessment 18 Till lessons (6 to 8) unit 10

1. Plot the points on the coordinate grid.



A (2 , 4) , B (2 , 7) , C (6 , 7)

D (6 , 4) , then find :

a. The name of the figure ABCD ________ .

b. The area of the figure ABCD = ________ ☐.

c. Write one of its attributes.

____

2. Choose the correct answer from these ones.

a. Which of the following points located on y-axis ?

A. (1 , 0) B. (0 , 1) C. (1 , 1) D. (3 , 0)

b. The subcategory between square and rectangle , they have ________ angles.

A. 4 Right B. 4 Acute C. 4 Obtuse

c. $\frac{3}{4} - \frac{5}{8} =$ ________ .

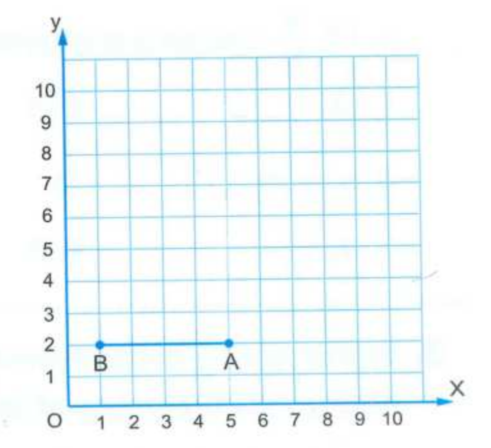
A. $\frac{1}{4}$ B. $\frac{1}{8}$ C. $\frac{3}{8}$ D. $\frac{5}{8}$

d. Which of the following is equal to $4 \times 2\frac{1}{2}$?

A. $8\frac{1}{2}$ B. 4 C. $\frac{10}{2}$ D. 10

3. Hassan is making a design using the grid. Starting from point A and match with point B.

Place the coordinate of point C to create an isosceles right-angled triangle at B.



Concept (9-1)
Multiplying Fractions and Mixed Numbers

Lesson (1): Multiplying a Fraction or a Mixed Number by a Whole Number:

Complete the input-output tables. Simplify your answer if possible:

1.

RULE: $\times \frac{9}{10}$	
Input	Output
2	______
4	______
6	______
8	______

2.

RULE: $\times 10\frac{1}{4}$	
Input	Output
2	______
4	______
6	______
8	______



Multiply, and then write the result in its simplest form:

a. $\frac{1}{3} \times 5 =$ ....

b. $4 \times \frac{1}{4} =$ ....

c. $\frac{2}{7} \times 21 =$ ....

d. $\frac{3}{5} \times 15 =$ ....

e. $9 \times \frac{5}{6} =$ ....

f. $\frac{1}{25} \times 10 =$ ....



g. $2\frac{3}{7} \times 4 =$ ....

h. $5\frac{1}{4} \times 8 =$ ....

i. $2\frac{2}{5} \times 6 =$ ....

j. $3\frac{1}{5} \times 10 =$ ....



Lesson (2): Estimating Products of Fractions and Mixed Numbers:

The Halves Have It Use your reasoning to evaluate each product. If necessary, draw a diagram to help. Simplify your answers, if possible.

1. $\frac{2}{3} \times \frac{1}{2} =$ ____________ $\frac{2}{3} \times 1\frac{1}{2} =$ ____________

2. $\frac{4}{5} \times \frac{1}{2} =$ ____________ $\frac{4}{5} \times 1\frac{1}{2} =$ ____________

3. $\frac{8}{10} \times \frac{1}{2} =$ ____________ $\frac{8}{10} \times 2\frac{1}{2} =$ ____________

4. $\frac{4}{12} \times \frac{1}{2} =$ ____________ $\frac{4}{12} \times 3\frac{1}{2} =$ ____________

5. $\frac{3}{5} \times \frac{1}{2} =$ ____________ $\frac{3}{5} \times 1\frac{1}{2} =$ ____________

6. $\frac{1}{4} \times \frac{1}{2} =$ ____________ $\frac{1}{4} \times 2\frac{1}{2} =$ ____________





Choose (less than, equal to, or greater than):

a. $\frac{3}{5} \times \frac{5}{3}$ [less than / greater than / equal to] $\frac{3}{5}$

b. $\frac{3}{5} \times \frac{3}{5}$ [less than / greater than / equal to] $\frac{3}{5}$

c. $\frac{3}{5} \times \frac{10}{5}$ [less than / greater than / equal to] $\frac{3}{5}$

d. $\frac{3}{5} \times \frac{10}{100}$ [less than / greater than / equal to] $\frac{3}{5}$



Lesson (3): Understanding Multiplication with Fractions:

Make It Equal Multiply to find equivalent fractions. Do not simplify the products.

1. $\frac{1}{4} \times \frac{3}{3}$
2. $\frac{3}{5} \times \frac{4}{4}$
3. $\frac{7}{12} \times \frac{6}{6}$
4. $\frac{5}{8} \times \frac{2}{2}$



1. $\frac{1}{2} \times \frac{1}{5} =$ ____________
2. $\frac{5}{6} \times \frac{2}{5} =$ ____________
3. $\frac{3}{5} \times \frac{1}{4} =$ ____________
4. $\frac{1}{3} \times \frac{3}{8} =$ ____________
5. $\frac{3}{4} \times \frac{1}{2} =$ ____________
6. $\frac{3}{6} \times \frac{5}{6} =$ ____________
7. $\frac{3}{4} \times \frac{3}{8} =$ ____________
8. $\frac{5}{8} \times \frac{3}{3} =$ ____________

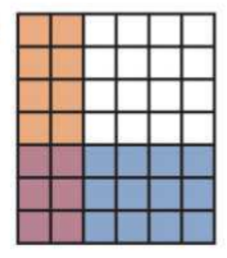






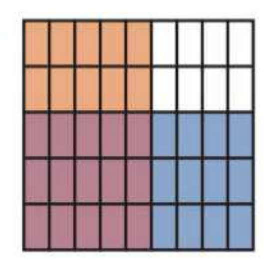
Missing Numbers Study the multiplication area models and fill in the missing fraction. Then, enter the product. Simplify your answers, if possible.

1.



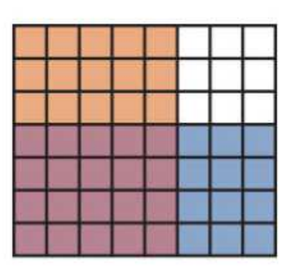
$\frac{2}{6} \times$ ________ = ________

2.



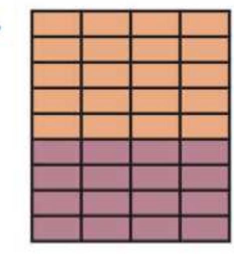
________ $\times \frac{3}{5} =$ ________

3.



$\frac{5}{8} \times$ ________ = ________

4.



________ $\times \frac{4}{9} =$ ________

Lesson (4): Multiplying Fractions by Fractions:

Let's Multiply Find the product. Simply your answers, if possible.

1. $\frac{1}{2} \times \frac{2}{8} =$ ________

2. $\frac{1}{3} \times \frac{2}{7} =$ ________

3. $\frac{3}{9} \times \frac{3}{4} =$ ________

4. $\frac{1}{4} \times \frac{1}{4} =$ ________

5. $\frac{5}{10} \times \frac{8}{10} =$ ________



Homework

Complete the input-output tables. Simplify your answer if possible:

3.

RULE: $\times 3\frac{5}{8}$	
Input	**Output**
2	______
4	______
6	______
8	______



Choose (less than, equal to, or greater than):

e. $\frac{7}{4} \times \frac{4}{7}$ [less than / greater than / equal to] $\frac{7}{4}$

f. $\frac{7}{4} \times \frac{4}{1}$ [less than / greater than / equal to] $\frac{7}{4}$

g. $\frac{7}{4} \times \frac{4}{4}$ [less than / greater than / equal to] $\frac{7}{4}$

h. $\frac{7}{4} \times \frac{99}{100}$ [less than / greater than / equal to] $\frac{7}{4}$

i. $1\frac{5}{6} \times \frac{5}{6}$ [less than / greater than / equal to] $1\frac{5}{6}$

j. $1\frac{5}{6} \times \frac{15}{16}$ [less than / greater than / equal to] $1\frac{5}{6}$

k. $1\frac{5}{6} \times \frac{16}{15}$ [less than / greater than / equal to] $1\frac{5}{6}$





Make It Simpler Write each product in its simplest form.

1. $\frac{3}{8} \times \frac{1}{6} =$ ____________

2. $\frac{1}{4} \times \frac{8}{11} =$ ____________

3. $\frac{4}{5} \times \frac{4}{9} =$ ____________

4. $\frac{5}{12} \times \frac{3}{5} =$ ____________

5. $\frac{5}{8} \times \frac{2}{15} =$ ____________





Lesson (5): Multiplying Fractions and Mixed Numbers:

Evaluate each product using the distribution property of multiplication:

a. $3\frac{4}{6} \times \frac{1}{4}$ = ...

b. $2\frac{2}{5} \times \frac{2}{3}$ = ...

c. $5\frac{1}{4} \times \frac{1}{2}$ = ...



Lesson (6): Multiplying Mixed Numbers:

Evaluate each product using the distribution property of multiplication:

a. $2\frac{2}{5} \times 1\frac{1}{2}$ = ______

(____ + ____) × (____ + ____)

= (____ × ____) + (____ × ____)

+ (____ × ____) + (____ × ____)

= ____ + ____ + ____ + ____

= ____

b. $2\frac{2}{3} \times 4\frac{3}{5}$ = ______

(____ + ____) × (____ + ____)

= (____ × ____) + (____ × ____)

+ (____ × ____) + (____ × ____)

= ____ + ____ + ____ + ____

= ____



c. $3\frac{1}{2} \times 2\frac{2}{7}$ = ______

(____ + ____) × (____ + ____)

= (____ × ____) + (____ × ____)

+ (____ × ____) + (____ × ____)

= ____ + ____ + ____ + ____

= ____

d. $2\frac{1}{2} \times 1\frac{1}{10}$ = ______

(____ + ____) × (____ + ____)

= (____ × ____) + (____ × ____)

+ (____ × ____) + (____ × ____)

= ____ + ____ + ____ + ____

= ____





Lesson (7): Multiplying Mixed Numbers Using Improper Fractions:

Match:

	Mixed Number	Improper Fraction
a.	$3\frac{1}{2}$	$\frac{31}{5}$
b.	$4\frac{3}{5}$	$\frac{7}{2}$
c.	$2\frac{1}{5}$	$\frac{4}{3}$
d.	$6\frac{1}{5}$	$\frac{11}{5}$
e.	$5\frac{1}{2}$	$\frac{13}{5}$
f.	$2\frac{3}{5}$	$\frac{8}{3}$
g.	$1\frac{1}{3}$	$\frac{23}{5}$
h.	$2\frac{2}{3}$	$\frac{11}{2}$



Rewrite the mixed numbers as improper fractions. Then, simplify before you multiply. Be sure to simplify your answers.

1. $2\frac{1}{4} \times 2\frac{2}{3} =$ ____________

2. $1\frac{5}{6} \times 4\frac{2}{5} =$ ____________

3. $3\frac{1}{2} \times 1\frac{3}{4} =$ ____________

4. $4\frac{2}{7} \times 2\frac{1}{3} =$ ____________



Lesson (8): Story Problems Involving Multiplication of Fractions and Mixed Numbers:

Ola and Omina were planting flowers in their garden. Ola had 2 bags of flower seeds, but Omina had only $\frac{3}{4}$ of a bag of seeds. Each girl planted $\frac{1}{2}$ of the seeds she had. **How many bags of seeds did they plant altogether ?**


Planting Seeds



Ayman is taking inventory of his landscaping supplies. He has $3\frac{1}{2}$ bags of fertilizer. Each bag weighs $7\frac{3}{4}$ kilograms. He writes that there are $21\frac{3}{8}$ kg of fertilizer in all. **Is Ayman correct ? Explain your thinking.**


Fertilizer



Homework

Evaluate each product using the distribution property of multiplication:

a. $\frac{3}{4} \times 2\frac{1}{5} =$ ....

b. $\frac{1}{8} \times 3\frac{2}{5} =$ ....

c. $2\frac{4}{7} \times \frac{5}{8} =$ ....



Evaluate each product using the distribution property of multiplication:

e. $5\frac{1}{3} \times 3\frac{3}{8} =$ ______

(______ + ______) × (______ + ______)

= (______ × ______) + (______ × ______)

\+ (______ × ______) + (______ × ______)

= ______ + ______ + ______ + ______

= ______

f. $1\frac{2}{7} \times 2\frac{1}{3} =$ ______

(______ + ______) × (______ + ______)

= (______ × ______) + (______ × ______)

\+ (______ × ______) + (______ × ______)

= ______ + ______ + ______ + ______

= ______

g. $3\frac{2}{3} \times 2\frac{1}{4} =$ ______

(______ + ______) × (______ + ______)

= (______ × ______) + (______ × ______)

\+ (______ × ______) + (______ × ______)

= ______ + ______ + ______ + ______

= ______

h. $5\frac{2}{3} \times 1\frac{2}{3} =$ ______

(______ + ______) × (______ + ______)

= (______ × ______) + (______ × ______)

\+ (______ × ______) + (______ × ______)

= ______ + ______ + ______ + ______

= ______



Rewrite the mixed numbers as improper fractions. Then, simplify before you multiply. Be sure to simplify your answers.

1. $1\frac{1}{3} \times 1\frac{3}{8} =$ ______________

2. $3\frac{1}{3} \times 5\frac{2}{5} =$ ______________

3. $5\frac{2}{7} \times 2\frac{6}{11} =$ ______________

4. $10\frac{2}{5} \times 4\frac{3}{8} =$ ______________





Aya purchased a bag of tomatoes from the market that has a mass of $2\frac{1}{3}$ kilograms. Her brother, Ameen, purchased a bag of potatoes that has a mass $1\frac{1}{2}$ times more than Aya's bag of tomatoes. **What is the mass of Ameen's bag of potatoes ?**



Nada is making spaghetti sauce.

The recipe calls for $1\frac{3}{4}$ cups of water,

she wants to make $4\frac{1}{2}$ times th recipe.

How much water should she use ?





Moustafa is harvesting sugarcane.

He can harvest $3\frac{3}{4}$ kilograms of sugarcane

in 1 hour. If he plans to work for $2\frac{1}{2}$ hours,

How much sugarcane will he harvest ?



sugarcane



Seif bought 4 bags of soil for his garden.

Each bag has a mass of $3\frac{1}{3}$ kilograms. If he only used $3\frac{3}{4}$ bags of soil,

How many kilograms did he use ?





Concept (9-2)
Dividing Whole Numbers and Unit Fractions

Lesson (9): Fractions as Division:

Match:

1. 2 bales of cotton shared by 3 manufacturers
2. 3 bales of cotton shared by 2 manufacturers
3. 5 bales of cotton shared by 2 manufacturers
4. 3 bales of cotton shared by 5 manufacturers
5. 2 bales of cotton shared by 4 manufacturers
6. 2 bales of cotton shared by 5 manufacturers

A. $4 \div 2$
B. $2 \div 5$
C. $2 \div 3$
D. $3 \div 2$
E. $5 \div 3$
F. $2 \div 4$
G. $5 \div 2$
H. $3 \div 5$



Expression	Quotient	Division Algorithm
Example: $6 \div 5$	$\frac{6}{5} = 1\frac{1}{5}$	$1\frac{1}{5}$; $5\overline{)6}$; -5; 1
1. $8 \div 5$		
2. $4 \div 3$		
3. $5 \div 4$		





Lesson (10): Story Problems Involving Fractions as Division:

The price of 8 pens is 12 L.E.

Find the price of each pen.





Divide 3 pizzas among 5 persons equally,

what is the share of each person?





Sameh ran 10 kilometers in 70 minutes. **How many kilometers per minute did he run?**



Lesson (11): Dividing Unit Fractions by Whole Numbers:

1. $\frac{1}{3} \div 5 =$ ______
2. $\frac{1}{2} \div 3 =$ ______
3. $\frac{1}{3} \div 2 =$ ______
4. $\frac{1}{3} \div 4 =$ ______





Write the missing number in each equation:

1. $\frac{1}{3} \div a = \frac{1}{12}$ $\frac{1}{3} \times b = \frac{1}{12}$ $a =$ ______ $b =$ ______

2. $\frac{1}{4} \div c = \frac{1}{20}$ $\frac{1}{4} \times d = \frac{1}{20}$ $c =$ ______ $d =$ ______

3. $\frac{1}{5} \div e = \frac{1}{30}$ $\frac{1}{5} \times f = \frac{1}{30}$ $e =$ ______ $f =$ ______

4. $\frac{1}{8} \div g = \frac{1}{24}$ $\frac{1}{8} \times h = \frac{1}{24}$ $g =$ ______ $h =$ ______



Lesson (12): Dividing Whole Numbers by Unit Fractions:

Find the missing value that makes each statement true:

1. $\frac{1}{3} \times$ ____ $= 1$
2. $\frac{1}{3} \times$ ____ $= 2$
3. $\frac{1}{3} \times$ ____ $= 3$
4. $\frac{1}{4} \times$ ____ $= 1$
5. $\frac{1}{4} \times$ ____ $= 2$
6. $\frac{1}{4} \times$ ____ $= 3$

Find the quotient:

1. $4 \div \frac{1}{3}$
2. $3 \div \frac{1}{5}$
3. $5 \div \frac{1}{2}$
4. $2 \div \frac{1}{4}$
5. $3 \div \frac{1}{4}$
6. $4 \div \frac{1}{5}$
7. $8 \div \frac{1}{2}$
8. $6 \div \frac{1}{3}$

Write the missing number in each equation:

1. $5 \div a = 15$ $5 \times b = 15$ $a =$ ______ $b =$ ______

2. $8 \div c = 32$ $8 \times d = 32$ $c =$ ______ $d =$ ______

3. $3 \times f = 6$ $3 \div g = 6$ $f =$ ______ $g =$ ______

4. $6 \div h = 30$ $6 \times j = 30$ $h =$ ______ $j =$ ______



Lesson (13): Story Problems involving Division of Whole numbers and Unit Fractions:

1. If a turtle can crawl $\frac{1}{2}$ kilometers per hour, how many hours would it take for the turtle to travel 8 km?

   Choose: $\frac{1}{2} \div 8$ or $8 \div \frac{1}{2}$



2. A teacher wants to give $\frac{1}{8}$ of a box of pencils to each student. She has 5 boxes of pencils. To how many students will she be able to give pencils?

   Choose: $\frac{1}{8} \div 5$ or $5 \div \frac{1}{8}$



3. Abdallah has 3 identical gifts to wrap. He uses $\frac{1}{2}$ of a roll of paper to wrap the gifts. If each gift uses the same amount of paper, how much paper did Abdallah use for each gift?

   Choose: $\frac{1}{2} \div 3$ or $3 \div \frac{1}{2}$





Homework

Choose the correct answer:

1. $12 \div 5$ equals each of the following except ______

A. $\frac{5}{12}$ B. $\frac{12}{5}$
C. $2\frac{2}{5}$ D. $2+\frac{2}{5}$

2. The missing fraction on the opposite division algorithm is ______

$$\begin{array}{r} 2\frac{\square}{\square} \\ 5\overline{)\,14} \\ -10 \\ \hline 4 \end{array}$$

A. $\frac{4}{14}$ B. $\frac{4}{5}$
C. $\frac{5}{4}$ D. $\frac{7}{2}$

3. If we divide 7 oranges among 5 persons, then each person has ______ orange.

A. $\frac{5}{7}$ B. $1\frac{1}{5}$
C. $2\frac{1}{5}$ D. $1\frac{2}{5}$

4. $6\frac{1}{2} =$ ______ $\div 2$

A. 11 B. 12
C. 13 D. 14

5. All the following expressions equal each other except ______

A. $22 \div 7$ B. $7 \div 22$
C. $3\frac{1}{7}$ D. $\frac{22}{7}$

6. If Sandy bought 5 kg of meat and wanted to divided it into 4 equally meals, then the number of kilograms in each meal = ______ kg

A. $1\frac{1}{2}$ B. $1\frac{1}{4}$
C. $1\frac{3}{4}$ D. $1\frac{1}{8}$

7. $12 \div 8 = 1\frac{1}{\square}$

A. 2 B. 3
C. 4 D. 5

8. $14 \div 5 =$ ______ $+ 2$

A. $\frac{2}{5}$ B. $\frac{3}{5}$
C. $\frac{4}{5}$ D. $\frac{1}{5}$



Shehab has 6 houseplants. It took him 45 minutes to replant them. **How long did it take him to replant each one?**

____



The flower shop received 8 equal-sized bundles of chrysanthemums and 10 vases.

If the bundles are divided equally among 10 vases, **what part of a bundle will each vase get?**



5. $\frac{1}{2} \div 7 =$ ____________________

6. $\frac{1}{8} \div 2 =$ ____________________

7. $\frac{1}{6} \div 3 =$ ____________________

8. $\frac{1}{5} \div 5 =$ ____________________



Write the missing number in each equation:

5. $\frac{1}{2} \times j = \frac{1}{14}$ $\quad \frac{1}{2} \div k = \frac{1}{14}$ $\quad j =$ ______ $\quad k =$ ______

6. $\frac{1}{7} \times m = \frac{1}{21}$ $\quad \frac{1}{7} \div n = \frac{1}{21}$ $\quad m =$ ______ $\quad n =$ ______

7. $\frac{1}{6} \div p = \frac{1}{12}$ $\quad \frac{1}{6} \times q = \frac{1}{12}$ $\quad p =$ ______ $\quad q =$ ______

8. $\frac{1}{10} \times r = \frac{1}{40}$ $\quad \frac{1}{10} \div s = \frac{1}{40}$ $\quad r =$ ______ $\quad s =$ ______



Write the missing number in each equation:

5. $8 \times k = 24$ $8 \div m = 24$ $k =$ ________ $m =$ ________

6. $7 \div n = 35$ $7 \times p = 35$ $n =$ ________ $p =$ ________

7. $3 \times q = 57$ $3 \div r = 57$ $q =$ ________ $r =$ ________

8. $9 \div s = 126$ $9 \times t = 126$ $s =$ ________ $t =$ ________



4. Afaf and Adel pulled up weeds in $\frac{1}{6}$ of the garden's area. If they divided the weeding equally, what total area of the garden did Afaf weed?

   Choose: $\frac{1}{6} \div 2$ or $2 \div \frac{1}{6}$



5. A toddler eats $\frac{1}{3}$ of a piece of bread each day for breakfast. If the loaf of bread contains 12 pieces, how many days of breakfast will the loaf of bread provide?

   Choose: $\frac{1}{3} \div 12$ or $12 \div \frac{1}{3}$



6. A computer takes $\frac{1}{200}$ of a second to complete a math problem. How many math problems can the computer answer in 120 seconds?

   Choose: $\frac{1}{200} \div 120$ or $120 \div \frac{1}{200}$



Answer the following questions.

a. How many halves are there in 7 ?

b. How many fifths are there in 8 ?

c. How many quarters are there in 6 ?

d. How many sixths are there in 10 ?

Unit (9) Assessment

[1] Choose the correct answer:

a. $\frac{1}{6} \div 3$ ◯ $\frac{1}{6} - \frac{1}{9}$

A. > B. < C. =

b. $2\frac{3}{4} \times$ .... $= 1$

A. $\frac{4}{11}$ B. $\frac{11}{4}$ C. 4 D. $\frac{4}{3}$

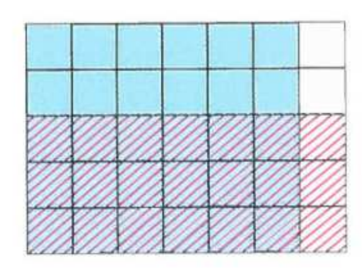
c. $(4 \times 2) + (4 \times \frac{2}{7}) + (\frac{1}{3} \times 2) + (\frac{1}{3} \times \frac{2}{7}) =$ ....

A. $4\frac{2}{7} \times 2\frac{1}{3}$ B. $4\frac{1}{3} \times 2\frac{2}{7}$ C. $3\frac{1}{4} \times 2\frac{2}{7}$ D. $4\frac{3}{7} \times 3\frac{2}{3}$

d. $0.25 \times \frac{6}{7} =$ ....

A. $\frac{1}{14}$ B. $\frac{1}{7}$ C. $\frac{3}{14}$ D. $\frac{2}{7}$

e. The opposite model represents ....



A. $\frac{2}{5} \times \frac{7}{6}$ B. $\frac{2}{7} \times \frac{5}{6}$

C. $\frac{2}{5} \times \frac{3}{7}$ D. $\frac{3}{5} \times \frac{6}{7}$

f. $2\frac{2}{3} \times \frac{3}{5} =$ ....

A. $\frac{5}{8}$ B. $1\frac{3}{5}$ C. $1\frac{8}{15}$ D. $2\frac{6}{15}$

g. $7 \div \frac{1}{2} =$ ....

A. $3\frac{1}{2}$ B. 3 C. 14 D. 16

[2] Complete:

a. $\frac{3}{\ldots} \times \frac{5}{8} = \frac{15}{56}$

b. If $9 \div K = 126$, then K = ...

c. $\frac{3}{4} - \frac{5}{8} =$ .... $\div 4$

d. $25 \div 6 = 2\frac{1}{2} \times 1\frac{\ldots}{3}$

e. $\frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \times \frac{5}{6} \times \frac{6}{7} =$ ....

f. If $\frac{1}{3} \div m = \frac{1}{12}$, then m = ...

g. $3 \div \frac{1}{5} =$ ....

h. $\frac{2}{5} \times 2\frac{1}{2} =$ ....

[3] Choose the correct answer:

a. $7\frac{1}{7} \times \frac{9}{8}$ ◯ $7\frac{1}{7}$

A. $>$ B. $<$ C. $=$

b. If $\frac{6}{23} \times a = \frac{6}{23} + \frac{6}{23} + \frac{3}{23}$, then a = ...

A. $1\frac{1}{2}$ B. 2 C. $2\frac{1}{2}$ D. 3

c. If $6 \div h = 30$, then h = ...

A. $\frac{1}{5}$ B. 180 C. 5 D. 90

d. $3 \times \frac{1}{3}$ ◯ $3 \div \frac{1}{3}$

A. $>$ B. $<$ C. $=$

e. $1\frac{1}{3} \times 1\frac{1}{4} =$ ....

A. $1\frac{2}{3}$ B. $2\frac{1}{7}$ C. $2\frac{1}{12}$ D. $1\frac{1}{12}$

f. $\frac{1}{7} \times m = \frac{1}{21}$, then m = ...

A. $\frac{1}{7}$ B. $\frac{1}{21}$ C. $\frac{1}{3}$ D. $\frac{1}{147}$

g. $\frac{5}{3} \times 21 \times \frac{2}{7} =$ ....

A. $\frac{24}{35}$ B. $\frac{21}{21}$ C. 1 D. 10



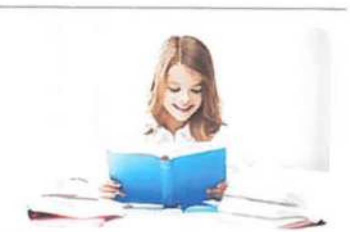
[4] Answer the following:

a. Sandy eats $\frac{1}{3}$ of a piece of bread each day for breakfast.
If the loaf of bread contains 9 pieces.
How many days of breakfast will the loaf of bread provide ?



---

b. Mariam is reading a chapter book. She can usually read $7\frac{1}{3}$ pages in one hour. If she plans to read for two hours and 15 minutes.
How many pages will she read ?



---

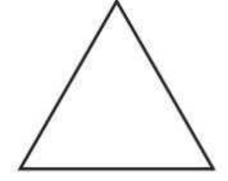
c. A teacher wants to give $\frac{1}{4}$ of a box pencils to each student. He has 6 boxes of pencils.
To how many students will he be able to give pencils ?

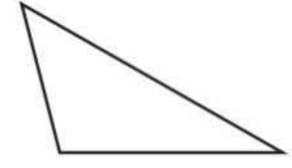




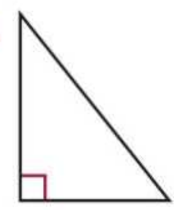
Lesson (2): Tricky Triangles:

Label each triangle. In each angle, place A for acute, O for obtuse and R for right:

1. 

2. 

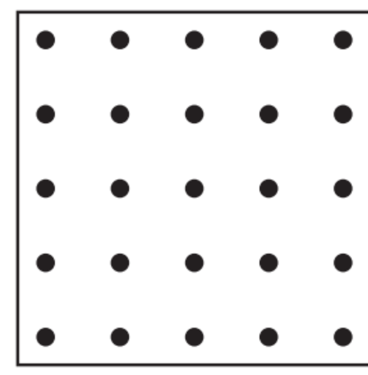
3. 

4. 



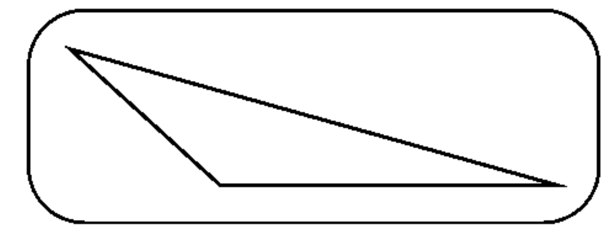
Using the dot paper, can you draw?

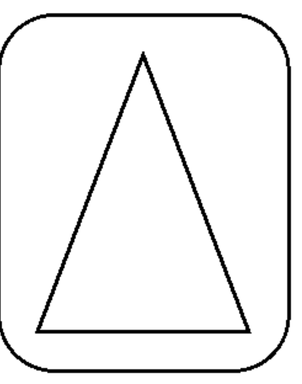
1- A triangle with two right angles?
2- A triangle with two obtuse angles?

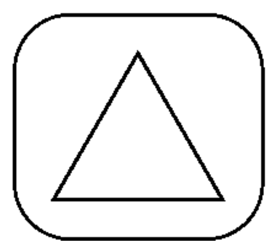


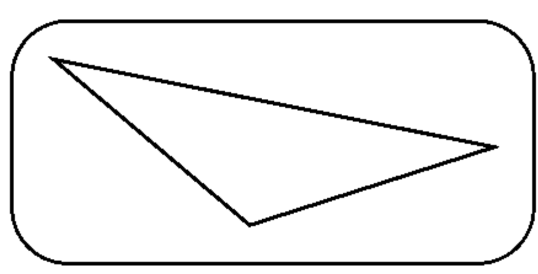


Measure the length of each side. Record your measurements in cm:

1. 

3. 

2. 

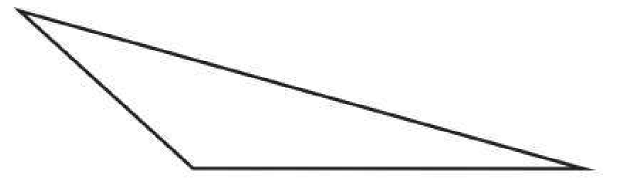
4. 





Select the best name for each triangle based on its properties:

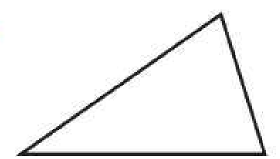
1.



Which two types of triangles are shown?

A. scalene triangle
B. isosceles triangle
C. equilateral triangle
D. right triangle
E. acute triangle
F. obtuse triangle

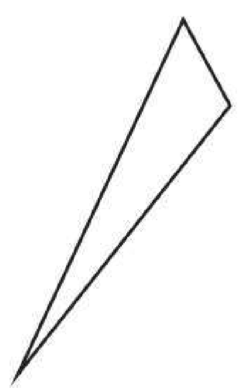
2.



Which two types of triangles are shown?

A. scalene triangle
B. isosceles triangle
C. equilateral triangle
D. right triangle
E. acute triangle
F. obtuse triangle

3.



Which two types of triangles are shown?

A. scalene triangle
B. isosceles triangle
C. equilateral triangle
D. right triangle
E. acute triangle
F. obtuse triangle





Determine the type of each of the following triangles given the measures of their angles.

a. m (∠E) = 30° , m (∠F) = 90° and m (∠G) = 60° " .... -angled triangle"

b. m (∠I) = 30° , m (∠J) = 40° and m (∠K) = 110° " .... -angled triangle"

c. m (∠S) = 51° , m (∠T) = 67° and m (∠U) = 62° " .... -angled triangle"

d. m (∠L) = 32° , m (∠N) = 58° and m (∠M) = 90° " .... -angled triangle"

e. m (∠X) = 46° , m (∠Y) = 38° and m (∠Z) = 96° " .... -angled triangle"

f. m (∠H) = m (∠B) = 70° and m (∠A) = 40° " .... -angled triangle"

g. m (∠A) = m (∠B) = 45° and ∠C is a right angle. " .... -angled triangle"



Determine the type of the triangles according to their side lengths using the following data.

a. AB = 6.5 cm , BC = 7 cm and CA = 6.5 cm " .... triangle"

b. XY = 4.5 cm , YZ = 8 cm and ZX = 5.5 cm " .... triangle"

c. NO = 4.5 cm , OR = 4.5 cm and RN = 4.5 cm " .... triangle"

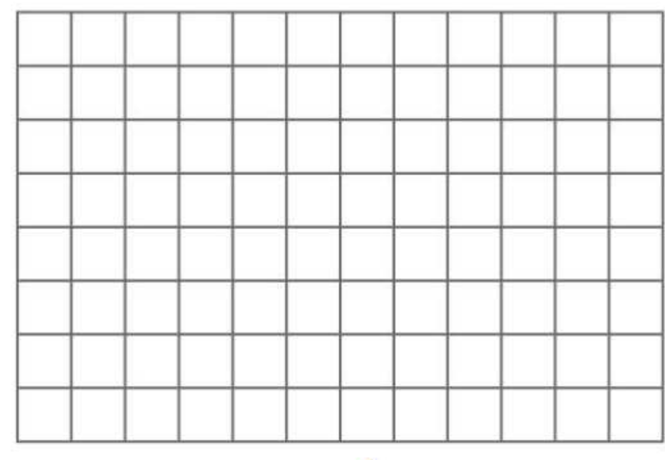
d. MA = AY = 9 cm and YM = 10 cm " .... triangle"

e. AM = 10 cm , MR = 7 cm and RA = $\frac{1}{2}$ AM " .... triangle"





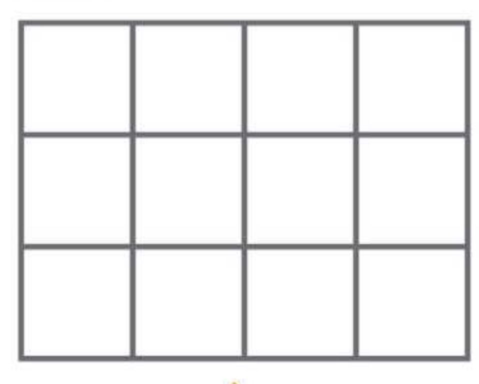
Amir measures a painting. It is $4\frac{1}{3}$ units long by $2\frac{1}{2}$ units wide. Draw a model of the painting. Be prepared to complete the problem with your class.





Lesson (5): Applying the Area Formula:

Puzzling Rectangles The rectangle shown is composed of squares that measure $2\frac{1}{4}$ centimeters on each side. What is its area in square centimeters? Explain your thinking in models and numbers.





1. $2 \times \frac{1}{2} =$

2. $1\frac{1}{4} \times 3 =$

3. $\frac{3}{5} \times \frac{2}{9} =$

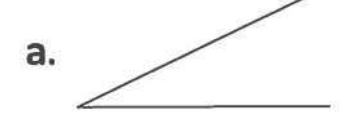
4. $2\frac{3}{4} \times 1\frac{1}{8} =$





Homework

1. Write the type of each angle.

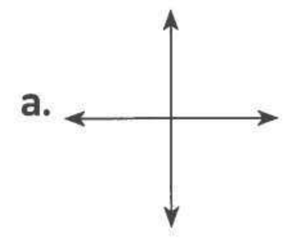
a. 

______

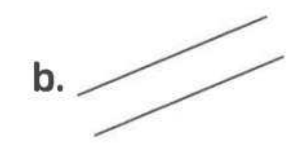
b. ______

c. ______

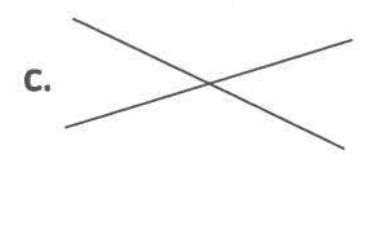
2. Write the relation between 2- straight lines.

a. 

______

b. 

______

c. 

______



Write the name that best describes each figure.

a. ______

b. ______

c. ______

d. 

______

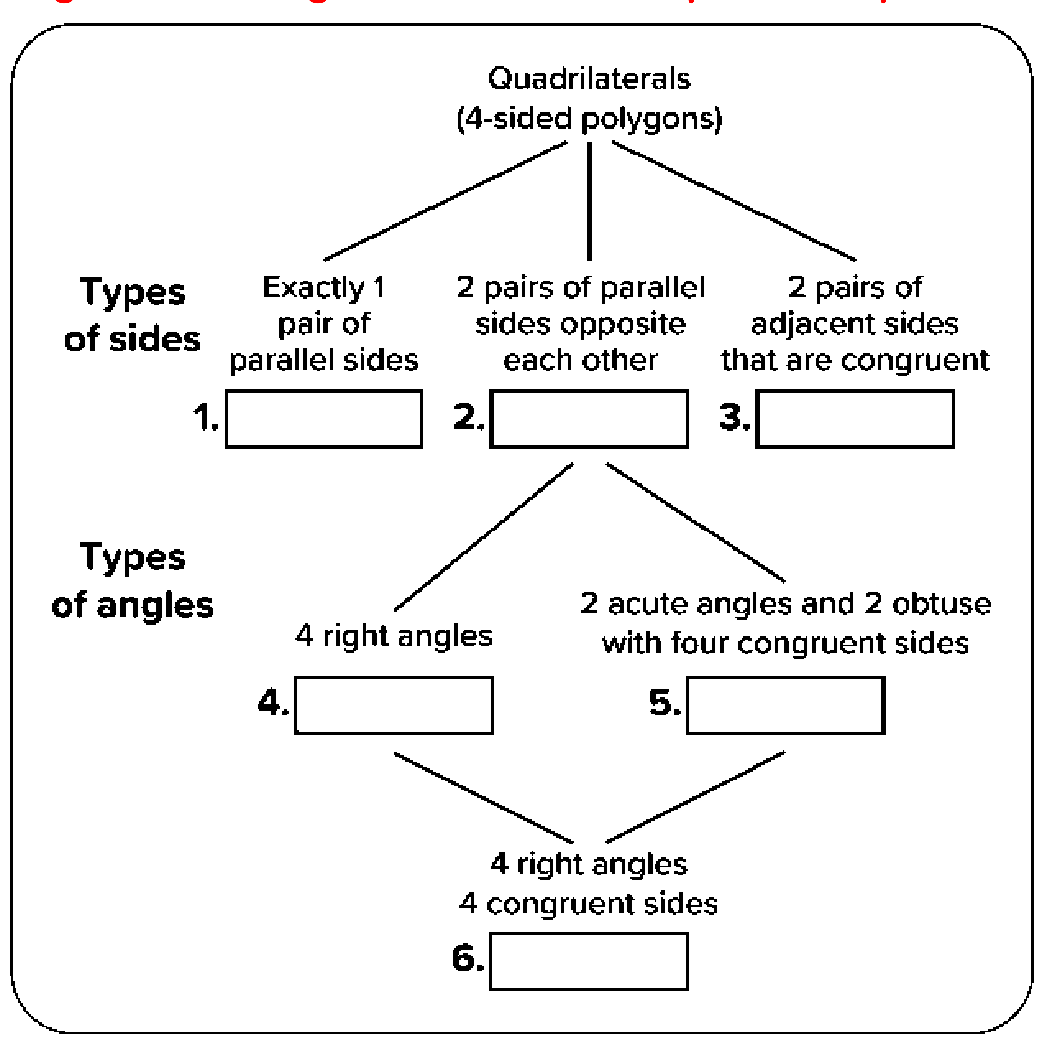
e. 

______

f. ______

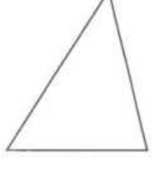
Use the list of quadrilaterals to fill in the chart:

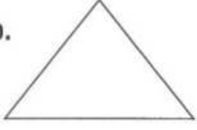
Rectangle – Parallelogram – Rhombus – Square – Trapezium – Kite

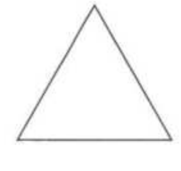




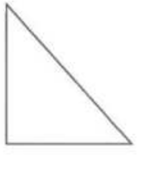
1. Classify each triangle as equilateral, isosceles, or scalene.

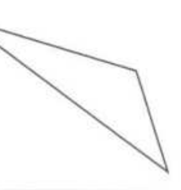
a. 

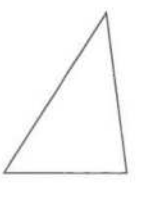
b. 

c. 

2. Classify each triangle as acute, right, or obtuse.

a. 

b. 

c. 



Choose the correct answer:

1. If the side lengths of a triangle are different, then the triangle is called ________ triangle.
   A. equilateral B. isosceles C. scalene

2. The triangle whose side lengths are 7 cm, 4 cm and 7 cm is called ________ triangle.
   A. equilateral B. isosceles C. scalene

3. The triangle whose side lengths are 8 cm, 6 cm and ________ cm is called scalene triangle.
   A. 8 B. 6 C. 7

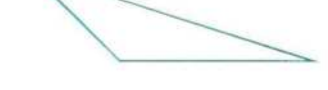
4. 50°, 70° and 60° are the measures of the angles of ________ triangle.
   A. an obtuse-angled B. a right-angled C. an acute-angled

5. The triangle whose side lengths are ________ is an equilateral triangle.
   A. 7 cm, 6 cm, 7 cm B. 5 cm, 5 cm, 5 cm
   C. 5 cm, 6 cm, 7 cm D. 3 cm, 4 cm, 4 cm

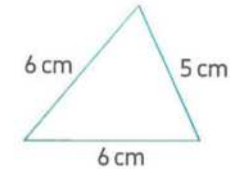
6. The triangle whose measures of angles are 40°, 50° and ________ is right-angled triangle.
   A. 50° B. 40° C. 90° D. 180°

7. The triangle whose measures of angles are ________ is an obtuse-angled triangle.
   A. 30°, 100°, 50° B. 30°, 60°, 90° C. 70°, 80°, 30° D. 50°, 80°, 50°

8. The opposite triangle is ________
   A. acute B. right
   C. obtuse D. equilateral



9. The opposite triangle is ________
   A. equilateral B. isosceles
   C. scalene D. obtuse

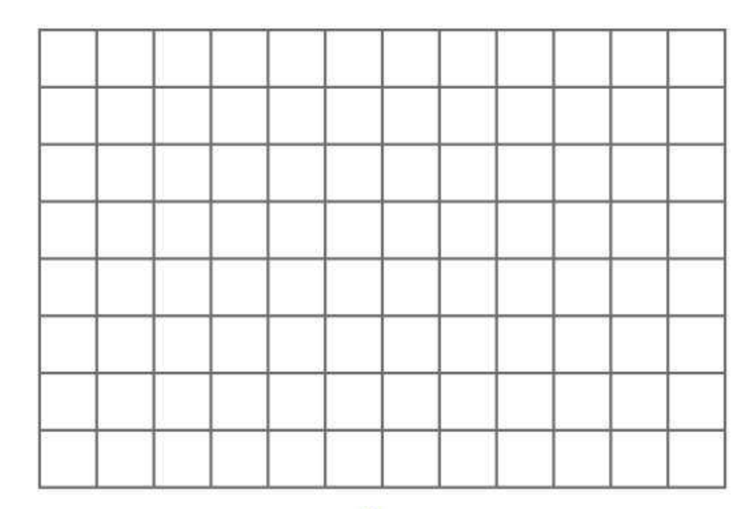


10. I am a triangle with only 2 equal sides, the measure of one of my angles is greater than 90°.
    What kind of triangle am I?
    A. isosceles, right B. isosceles, obtuse C. scalene, obtuse D. isosceles, acute



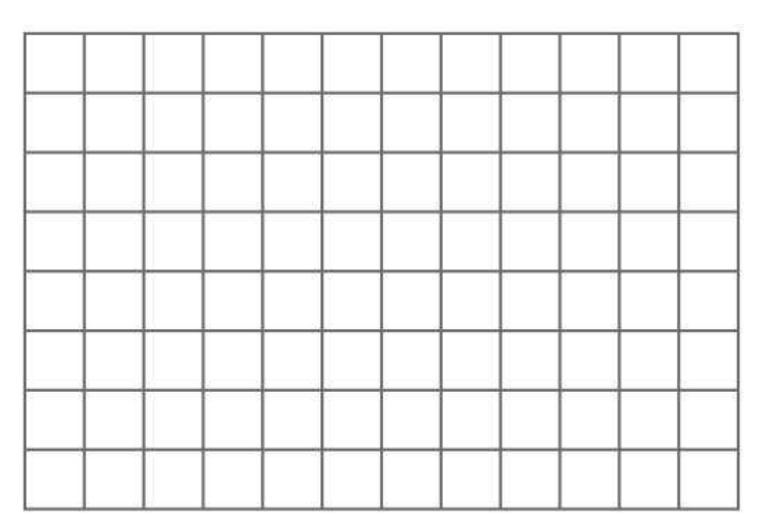


Draw a model for a rectangle measuring $2\frac{1}{2}$ meters by $10\frac{3}{4}$ m. Then, find the area.





Draw a model for a rectangle measuring $9\frac{1}{4}$ meters by $3\frac{1}{2}$ m. Then, find the area.





A mosque has a window that is $\frac{3}{10}$ meter wide and 2 m long. What is the area of the window in square meters ?



Challenge

The Egyptian Museum Floor Plan

New flooring will be installed in rooms 12 and 17, shown in the given map. In order to plan, the museum staff need to determine the areas of the floors.

- Room 12 measures $8\frac{1}{2}$ meters by $5\frac{1}{2}$ m.
- Room 17 measures $8\frac{1}{2}$ meters by $4\frac{1}{2}$ m.

1. What is the area of Room 12?
2. What is the area of Room 17?
3. What is the combined area of both rooms?



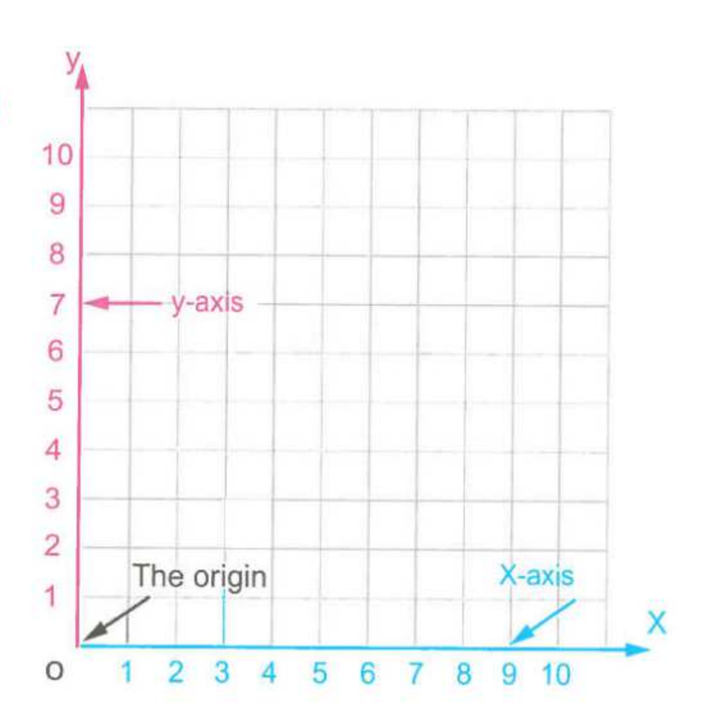


Concept (10-2)
Coordinate Planes

Lesson (6): Introduction to Coordinate Planes:

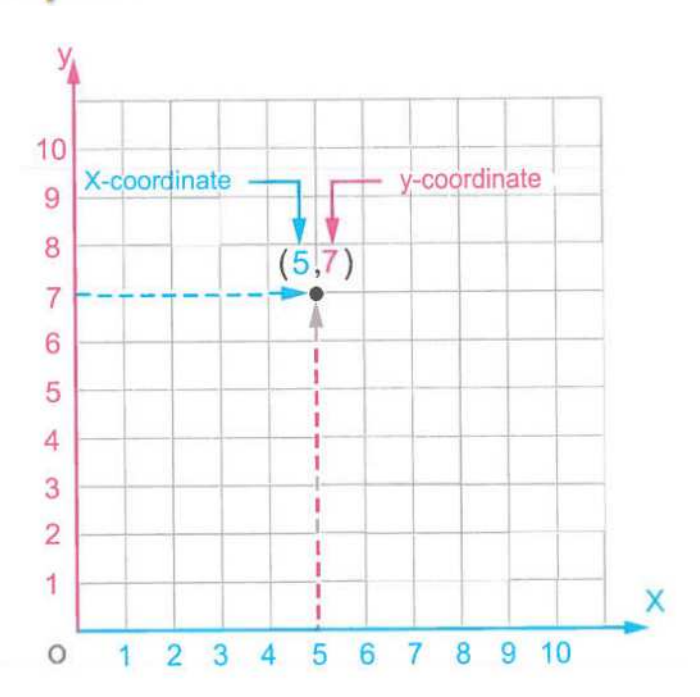
⇨ The coordinate plane

The coordinate plane is the plane determined by a horizontal line, called the x-axis, and a vertical line, called the y-axis, intersecting at a point, called **the origin.** It is labeled as "**O**"



⇨ The ordered pair

The ordered pair is a pair of numbers used to locate any point on a coordinate plane. Ordered pairs are written left to right (x , y)

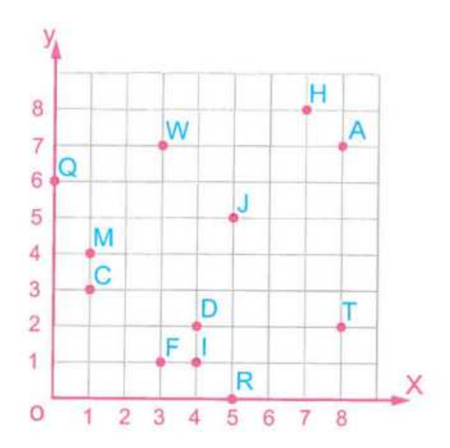






Lesson (7): Plotting Points on a Coordinate Plane:

Using the following graph, answer [a] , [b] and [c]



a. What is the name of each of the following points ?

1. (3 ,1)
2. (7 ,8)
3. (1 ,4)
4. (5 ,0)
5. (8 ,7)
6. (4 ,2)
7. (5 ,5)
8. (1 ,3)

b. Write the ordered pair for each of the following points :

1. A
2. T
3. W
4. I
5. Q

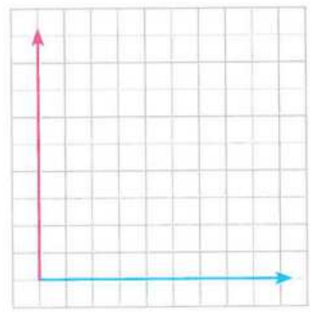
c. Plot the following points on the coordinates grid :

1. B (2 ,8)
2. E (0 ,7)
3. X (6 ,3)
4. S (8 ,5)
5. P (2 ,1)
6. G (7 ,7)



Plot the points on the coordinate grid.

A (3 ,5) , B (6 ,5) , C (6 ,2) , D (3 ,2) and connect the points in order.



a. What polygon did you create ?

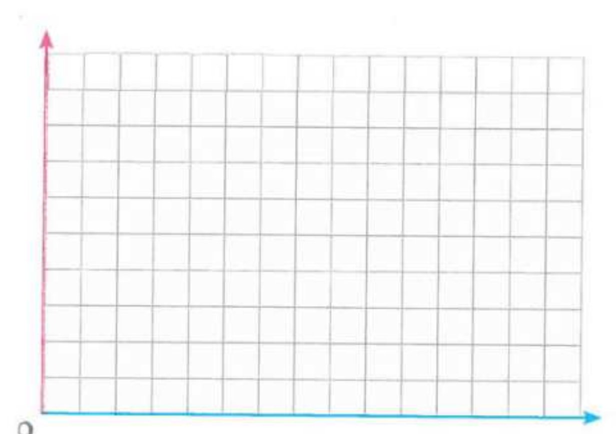
b. Complete.

- $\overline{AD}$ // ....
- $\overline{AB}$ // ....
- $\overline{DC}$ ⊥ ....
- $\overline{BC}$ ⊥ ....

a. Plot the points on the coordinate grid.

A (3 ,2) B (3 ,5)

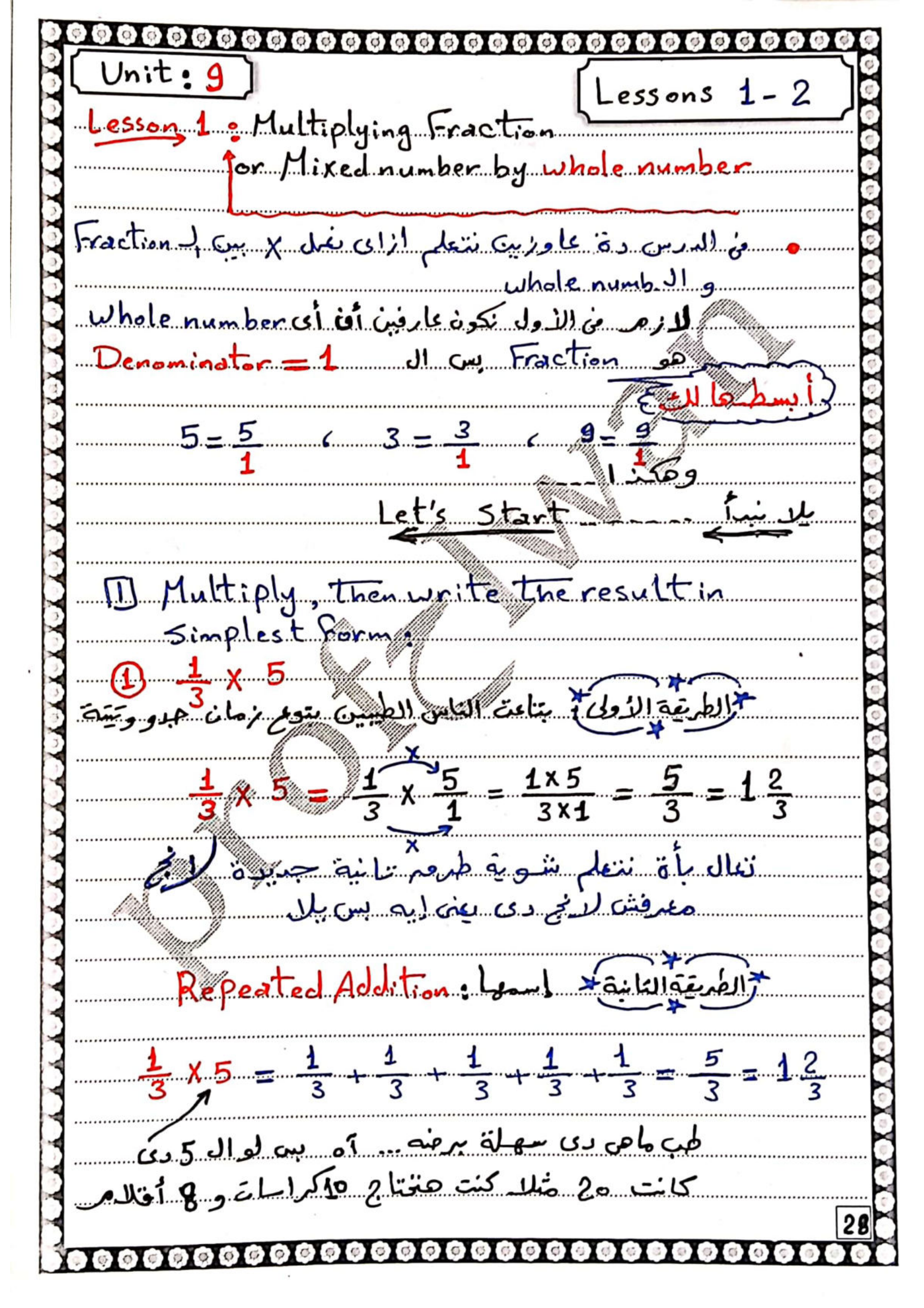
C (6 ,5) D (6 ,2)



b. Connect the points in order.

What polygon did you create ?





Unit : 9

Lessons 1 - 2

Lesson 1 : Multiplying Fraction or Mixed number by whole number

• فى الدرس دة عاوزين نتعلم ازاى نعمل x بين ال Fraction و ال whole numb.

لازم من الأول نكون عارفين أن أى whole number هو Fraction بس ال Denominator = 1

أبسطها اللى

$5 = \frac{5}{1}$ ، $3 = \frac{3}{1}$ ، $9 = \frac{9}{1}$ وهكذا ...

يلا نبدأ .... Let's Start

[1] Multiply, then write the result in simplest form :

① $\frac{1}{3} \times 5$

الطريقة الأولى : بتاعت الناس الطيبين بتوع زمان جدو وتيتة

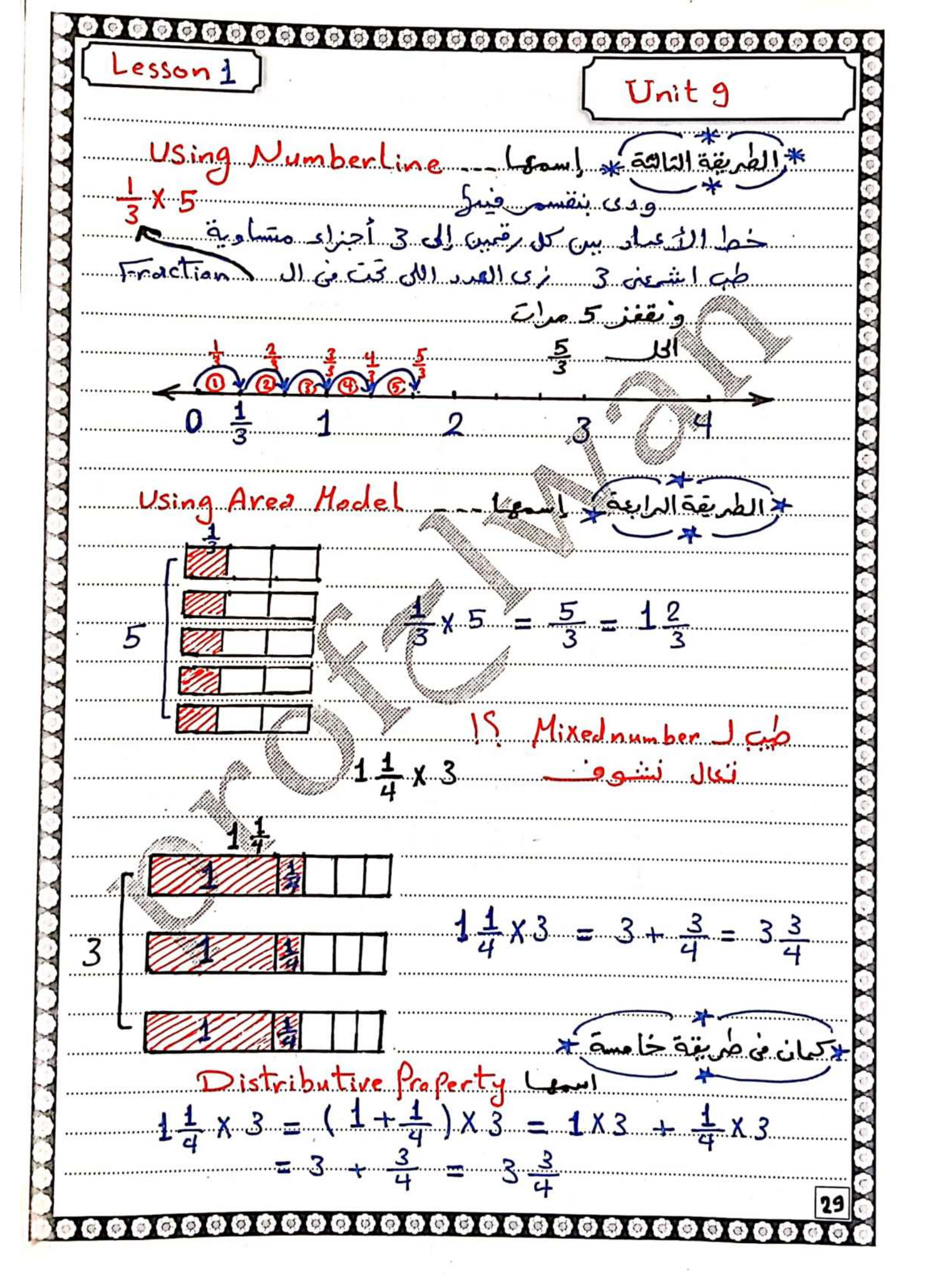
$$\frac{1}{3} \times 5 = \frac{1}{3} \times \frac{5}{1} = \frac{1 \times 5}{3 \times 1} = \frac{5}{3} = 1\frac{2}{3}$$

تعال بأة نتعلم شوية طريقة تانية جديدة لانج معرفش لانج دى يعنى ايه بس يلا

الطريقة الثانية : اسمها Repeated Addition

$$\frac{1}{3} \times 5 = \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = \frac{5}{3} = 1\frac{2}{3}$$

طب ماهى دى سهلة برضه ... آه بس لو ال 5 دى كانت 20 مثلا كنت هحتاج 10 كراسات و 8 أقلام



Lesson 1

Unit 9

Using Numberline ... اسمها ⁎ الطريقة الثالثة ⁎

$\frac{1}{3} \times 5$

ودى بنقسم فيها

خط الأعداد بين كل رقمين إلى 3 أجزاء متساوية

طب اشمعنى 3 زى العدد اللى تحت فى ال Fraction

ونقفز 5 مرات

الحل $\frac{5}{3}$

Using Area Model ... اسمها ⁎ الطريقة الرابعة ⁎

$\frac{1}{3} \times 5 = \frac{5}{3} = 1\frac{2}{3}$

طب لـ Mixednumber ؟!

تعال نشوف

$1\frac{1}{4} \times 3$

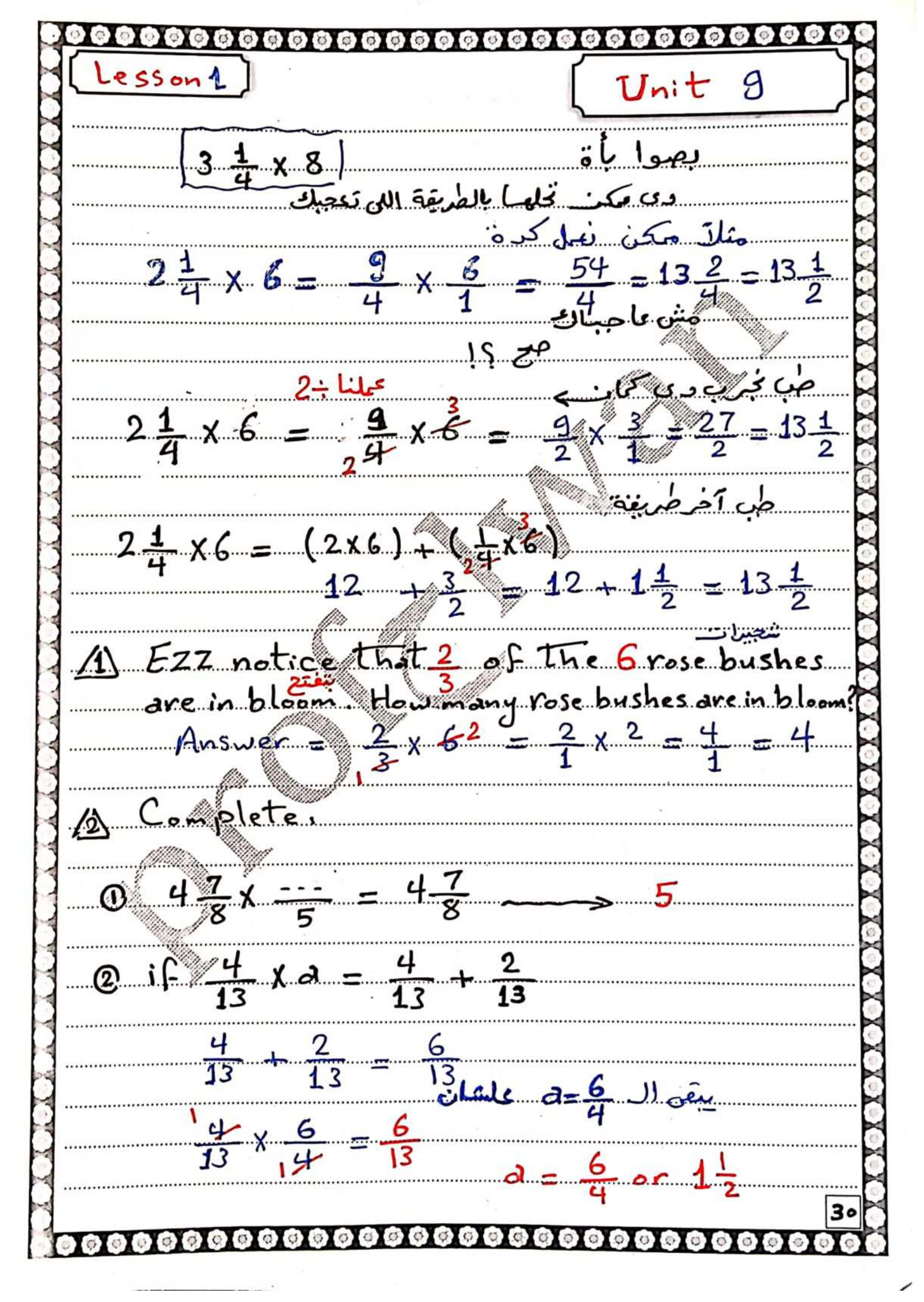
$1\frac{1}{4} \times 3 = 3 + \frac{3}{4} = 3\frac{3}{4}$

⁎ كمان فى طريقة خامسة ⁎

Distributive Property اسمها

$1\frac{1}{4} \times 3 = (1 + \frac{1}{4}) \times 3 = 1 \times 3 + \frac{1}{4} \times 3$

$= 3 + \frac{3}{4} = 3\frac{3}{4}$



Lesson 1

Unit 9

$3\frac{1}{4} \times 8$

بصوا بأة

دى ممكن تحلها بالطريقة اللى تعجبك

مثلاً ممكن نعمل كدة

$2\frac{1}{4} \times 6 = \frac{9}{4} \times \frac{6}{1} = \frac{54}{4} = 13\frac{2}{4} = 13\frac{1}{2}$

مش عاجباك

صح ؟!

طب نجرب دى كمان

عملنا $2 \div$

$2\frac{1}{4} \times 6 = \frac{9}{4} \times 6 = \frac{9}{2} \times \frac{3}{1} = \frac{27}{2} = 13\frac{1}{2}$

طب آخر طريقة

$2\frac{1}{4} \times 6 = (2 \times 6) + (\frac{1}{4} \times 6)$

$12 + \frac{3}{2} = 12 + 1\frac{1}{2} = 13\frac{1}{2}$

1. Ezz notice that $\frac{2}{3}$ of the 6 rose bushes (شجيرات) are in bloom (تتفتح). How many rose bushes are in bloom?

Answer $= \frac{2}{3} \times 6 = \frac{2}{1} \times 2 = \frac{4}{1} = 4$

2. Complete.

① $4\frac{7}{8} \times \frac{---}{5} = 4\frac{7}{8}$ ⟶ 5

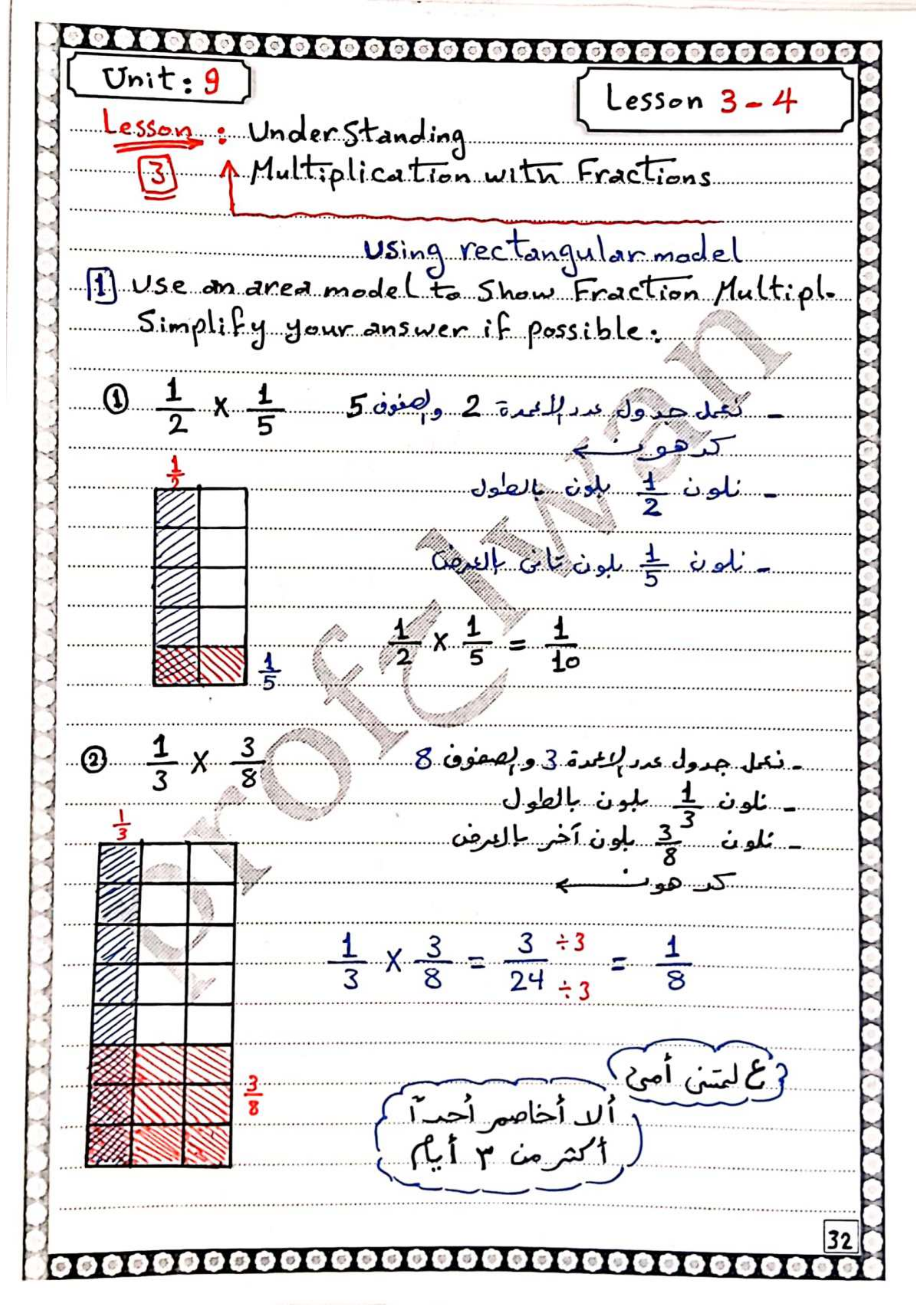
② if $\frac{4}{13} \times a = \frac{4}{13} + \frac{2}{13}$

$\frac{4}{13} + \frac{2}{13} = \frac{6}{13}$

يبقى ال $a = \frac{6}{4}$ علشان

$\frac{4}{13} \times \frac{6}{4} = \frac{6}{13}$

$a = \frac{6}{4}$ or $1\frac{1}{2}$



Unit: 9

Lesson 3 - 4

Lesson 3 : Understanding Multiplication with Fractions

Using rectangular model

1 Use an area model to Show Fraction Multipl. Simplify your answer if possible.

① $\frac{1}{2} \times \frac{1}{5}$

- نعمل جدول عدد الأعمدة 2 والصفوف 5 كده هو ←
- نلون $\frac{1}{2}$ بلون بالطول
- نلون $\frac{1}{5}$ بلون تاني بالعرض

$$\frac{1}{2} \times \frac{1}{5} = \frac{1}{10}$$

② $\frac{1}{3} \times \frac{3}{8}$

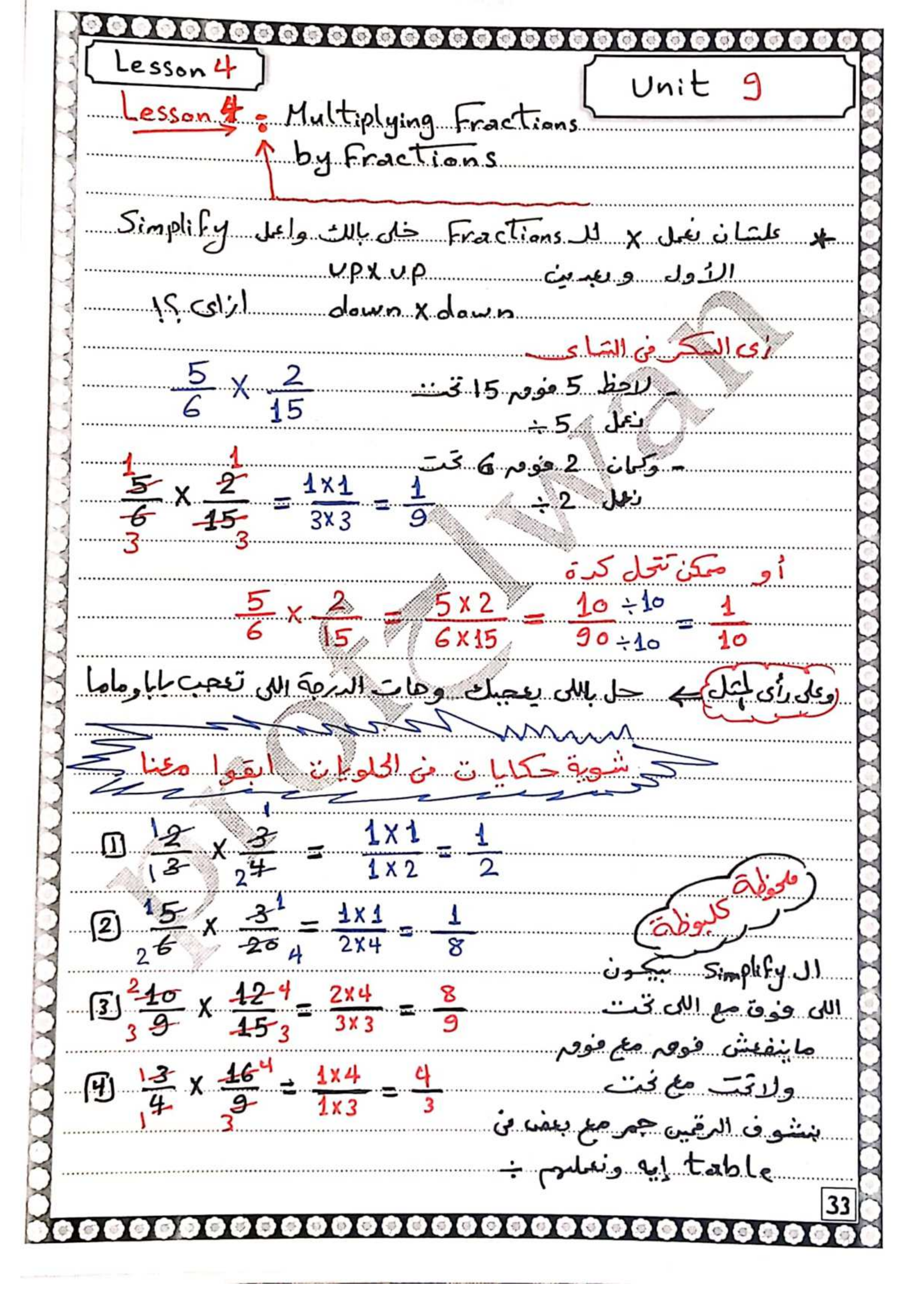
- نعمل جدول عدد الأعمدة 3 والصفوف 8
- نلون $\frac{1}{3}$ بلون بالطول
- نلون $\frac{3}{8}$ بلون آخر بالعرض

كده هو ←

$$\frac{1}{3} \times \frac{3}{8} = \frac{3 \div 3}{24 \div 3} = \frac{1}{8}$$

علمتني أمي

ألا أخاصم أحداً أكثر من ٣ أيام



Lesson 4

Unit 9

Lesson 4 : Multiplying Fractions by Fractions

* علشان نعمل x للـ Fractions خلى بالك واعمل Simplify الأول وبعدين up x up, down x down ازاى ؟!

زى السكر فى الشاى

$$\frac{5}{6} \times \frac{2}{15}$$

- لاحظ 5 فوق و 15 تحت نعمل ÷ 5
- وكمان 2 فوق و 6 تحت نعمل ÷ 2

$$\frac{\cancel{5}^{1}}{\cancel{6}_{3}} \times \frac{\cancel{2}^{1}}{\cancel{15}_{3}} = \frac{1 \times 1}{3 \times 3} = \frac{1}{9}$$

أو ممكن تتحل كدة

$$\frac{5}{6} \times \frac{2}{15} = \frac{5 \times 2}{6 \times 15} = \frac{10 \div 10}{90 \div 10} = \frac{1}{10}$$

وعلى رأى المثل ⟸ حل باللى يعجبك وهات الدرجة اللى تعجب بابا وماما

شوية حكايات من الحلويات ابقوا معنا

1) $\frac{\cancel{2}^{1}}{\cancel{3}_{1}} \times \frac{\cancel{3}^{1}}{\cancel{4}_{2}} = \frac{1 \times 1}{1 \times 2} = \frac{1}{2}$

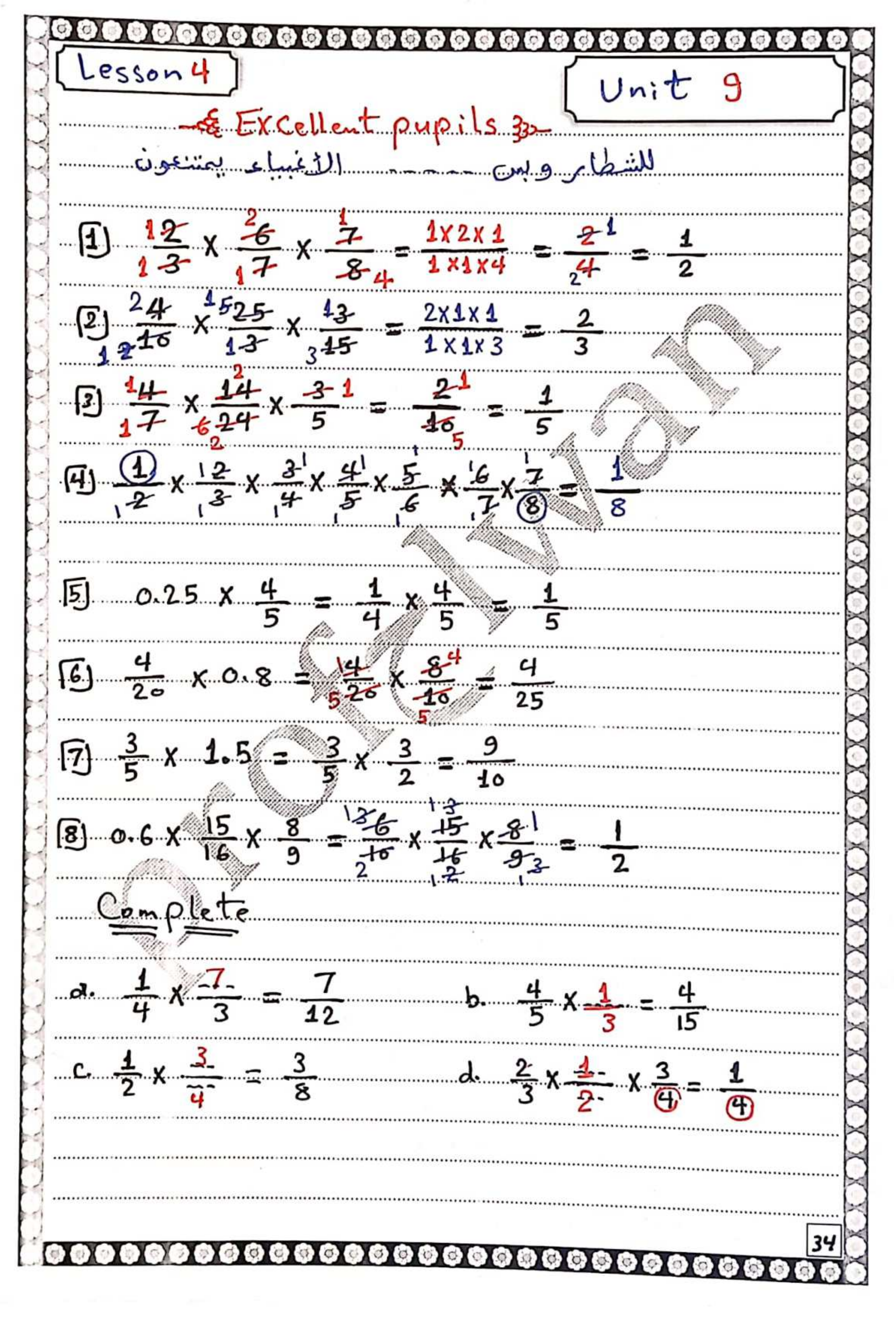
2) $\frac{\cancel{5}^{1}}{\cancel{6}_{2}} \times \frac{\cancel{3}^{1}}{\cancel{20}_{4}} = \frac{1 \times 1}{2 \times 4} = \frac{1}{8}$

3) $\frac{\cancel{10}^{2}}{\cancel{9}_{3}} \times \frac{\cancel{12}^{4}}{\cancel{15}_{3}} = \frac{2 \times 4}{3 \times 3} = \frac{8}{9}$

4) $\frac{\cancel{3}^{1}}{\cancel{4}_{1}} \times \frac{\cancel{16}^{4}}{\cancel{9}_{3}} = \frac{1 \times 4}{1 \times 3} = \frac{4}{3}$

ملحوظة كلبوظة

الـ Simplify بيكون اللى فوق مع اللى تحت ماينفعش فوق مع فوق ولا تحت مع تحت بنشوف الرقمين جم مع بعض فى table إيه ونعملهم ÷



Lesson 4

Unit 9

Excellent pupils

للشطار وبس ...... الأغبياء يمتنعون

1) $\frac{12}{3} \times \frac{6}{7} \times \frac{7}{8} = \frac{1 \times 2 \times 1}{1 \times 1 \times 4} = \frac{2}{4} = \frac{1}{2}$

2) $\frac{4}{10} \times \frac{25}{13} \times \frac{13}{15} = \frac{2 \times 1 \times 1}{1 \times 1 \times 3} = \frac{2}{3}$

3) $\frac{4}{7} \times \frac{14}{24} \times \frac{3}{5} = \frac{2}{10} = \frac{1}{5}$

4) $\frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \times \frac{5}{6} \times \frac{6}{7} \times \frac{7}{8} = \frac{1}{8}$

5) $0.25 \times \frac{4}{5} = \frac{1}{4} \times \frac{4}{5} = \frac{1}{5}$

6) $\frac{4}{20} \times 0.8 = \frac{4}{20} \times \frac{8}{10} = \frac{4}{25}$

7) $\frac{3}{5} \times 1.5 = \frac{3}{5} \times \frac{3}{2} = \frac{9}{10}$

8) $0.6 \times \frac{15}{16} \times \frac{8}{9} = \frac{6}{10} \times \frac{15}{16} \times \frac{8}{9} = \frac{1}{2}$

Complete

a. $\frac{1}{4} \times \frac{7}{3} = \frac{7}{12}$

b. $\frac{4}{5} \times \frac{1}{3} = \frac{4}{15}$

c. $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$

d. $\frac{2}{3} \times \frac{1}{2} \times \frac{3}{4} = \frac{1}{4}$

Unit: 9

Lessons 5-6-7

Lesson 5 Multiplying a mixed number by fraction or mixed number.

(1) $3\frac{4}{7} \times \frac{1}{5}$

الطريقة الاولى

$(3 + \frac{4}{7}) \times \frac{1}{5}$

$(3 \times \frac{1}{5}) + (\frac{4}{7} \times \frac{1}{5})$

$\frac{3\times7}{5\times7} + \frac{4}{35}$

$\frac{21}{35} + \frac{4}{35} = \frac{25}{35} = \frac{5}{7}$

Distributive property

الطريقة الثانية

$\frac{25}{7} \times \frac{1}{5}$

$\frac{5 \times 1}{7 \times 1} = \frac{5}{7}$

حلوة أهي وزي الفل

اسمها improper fraction

(2) $5\frac{1}{3} \times 2\frac{5}{8}$

$(5 + \frac{1}{3}) \times (2 + \frac{5}{8})$

$(5 \times 2) + (5 \times \frac{5}{8}) + (\frac{1}{3} \times 2) + (\frac{1}{3} \times \frac{5}{8})$

$10 + \frac{25\times3}{8\times3} + \frac{2\times8}{3\times8} + \frac{5}{24}$

$10 + \frac{75}{24} + \frac{16}{24} + \frac{5}{24}$

$10 + \frac{96}{24} = 10 + 4 = 14$

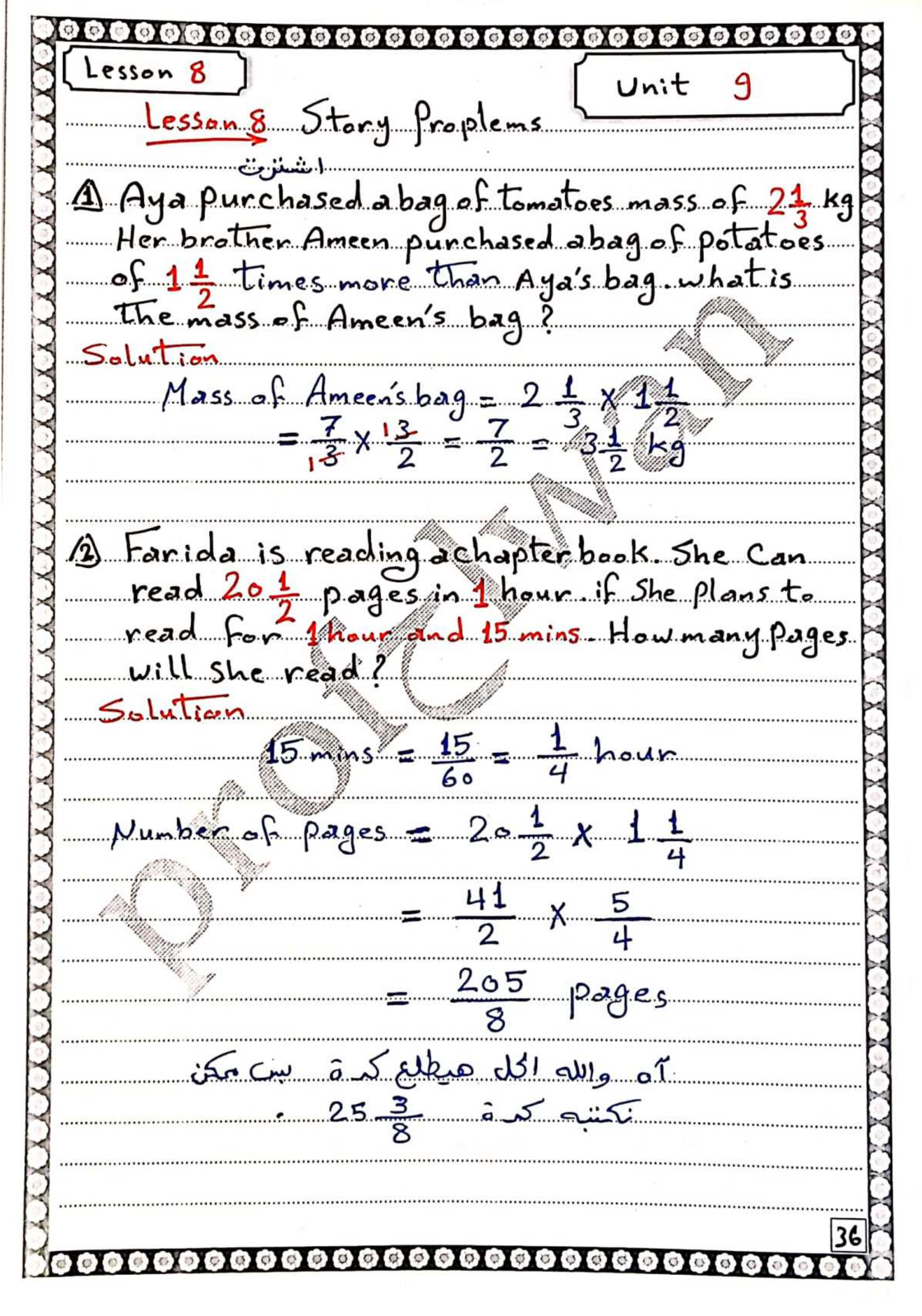
(2) $5\frac{1}{3} \times 2\frac{5}{8}$

$\frac{16}{3} \times \frac{21}{8}$

$\frac{2 \times 7}{1 \times 1} = \frac{14}{1} = 14$

شوف كل دة أدايه و دة أدايه

اخص على دى مسألة ليه كدة



Lesson 8

Unit 9

Lesson 8 → Story Proplems

اشترت

① Aya purchased a bag of tomatoes mass of $2\frac{1}{3}$ kg
Her brother Ameen purchased a bag of potatoes of $1\frac{1}{2}$ times more than Aya's bag. what is the mass of Ameen's bag ?

Solution

Mass of Ameen's bag $= 2\frac{1}{3} \times 1\frac{1}{2}$

$= \frac{7}{3} \times \frac{3}{2} = \frac{7}{2} = 3\frac{1}{2}$ kg

② Farida is reading a chapter book. She can read $20\frac{1}{2}$ pages in 1 hour. if She plans to read for 1 hour and 15 mins. How many pages will she read?

Solution

15 mins $= \frac{15}{60} = \frac{1}{4}$ hour

Number of pages $= 20\frac{1}{2} \times 1\frac{1}{4}$

$= \frac{41}{2} \times \frac{5}{4}$

$= \frac{205}{8}$ pages

آه والله اكل هيطلع كدة بس ممكن

نكتبه كدة $25\frac{3}{8}$.

Lessons 9-10

Fractions as Division

Story problems involving fractions as Division

* Division Algorithm

$8 \div 5 = 1\frac{3}{5}$

$$\begin{array}{r} 1 \\ 5\overline{)\,8} \\ -5 \\ \hline 3 \end{array}$$

$3 \div 2 = 1\frac{1}{2}$

$$\begin{array}{r} 1 \\ 2\overline{)\,3} \\ -2 \\ \hline 1 \end{array}$$

[1] The price of 7 pens is 13 L.E. Find The Price of each pen?

$$\begin{array}{r} 1 \\ 7\overline{)\,13} \\ -7 \\ \hline 6 \end{array}$$

$13 \div 7 = 1\frac{6}{7}$ L.E

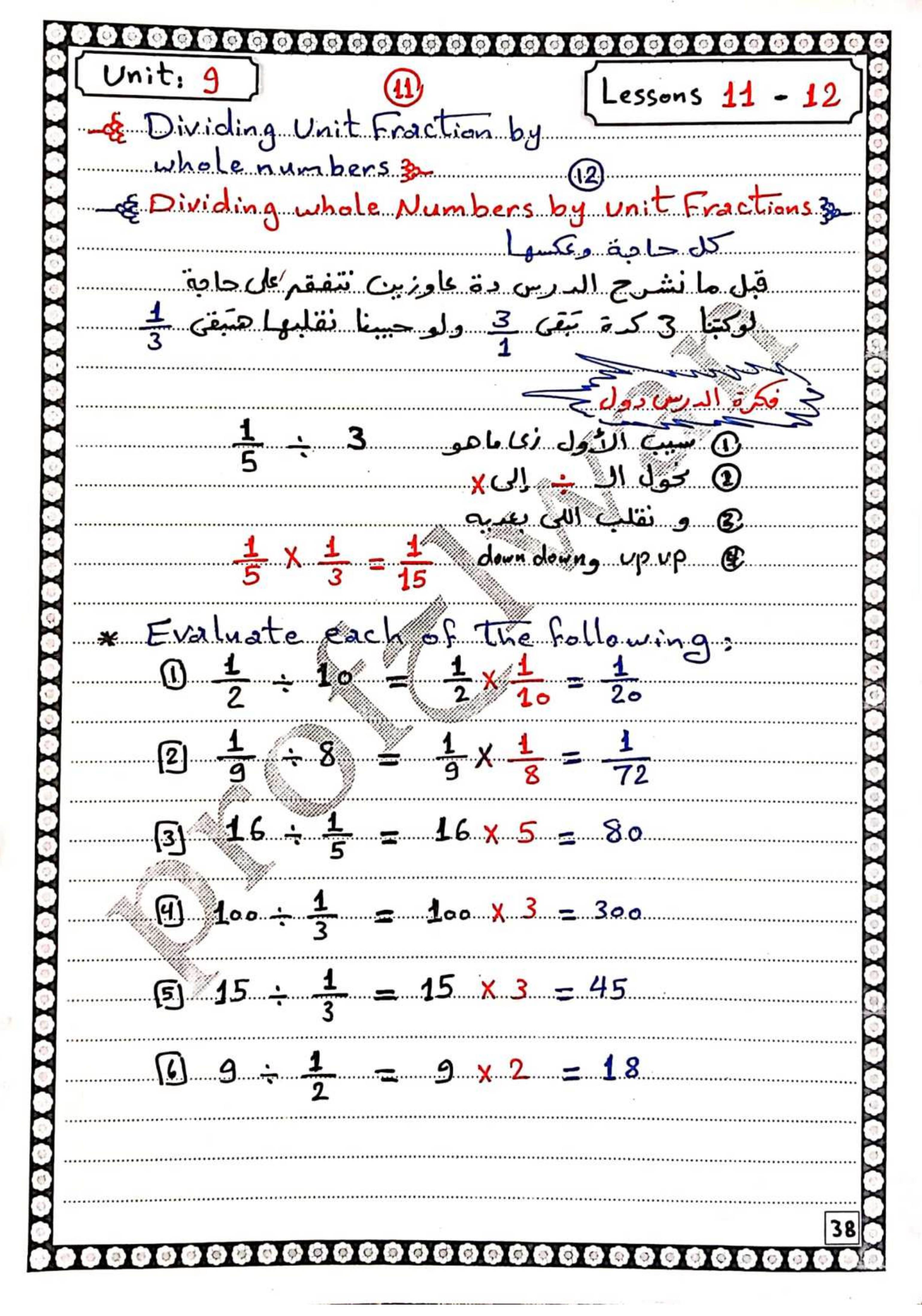
[2] Ali ran 20 Km in 90 mins. How many Kilometers per minute did he run?

He ran $= 20 \div 90 = \frac{2}{9}$ Km per min.

[3] Shehab has 6 houseplants it took him 45 min to replant them. How Long did it take him to replant each one.

$$\begin{array}{r} 7 \\ 6\overline{)\,45} \\ -42 \\ \hline 3 \end{array}$$

it takes $= 45 \div 6 = 7\frac{3}{6} = 7\frac{1}{2}$



Unit: 9 ⑪ Lessons 11 - 12

Dividing Unit Fraction by whole numbers

⑫

Dividing whole Numbers by unit Fractions

كل حاجة وعكسها

قبل ما نشرح الدرس دة عاوزين نتفق على حاجة

لوكتبنا 3 كدة تبقى $\frac{3}{1}$ ولو جيبنا نقلبها هتبقى $\frac{1}{3}$

فكرة الدرس دول

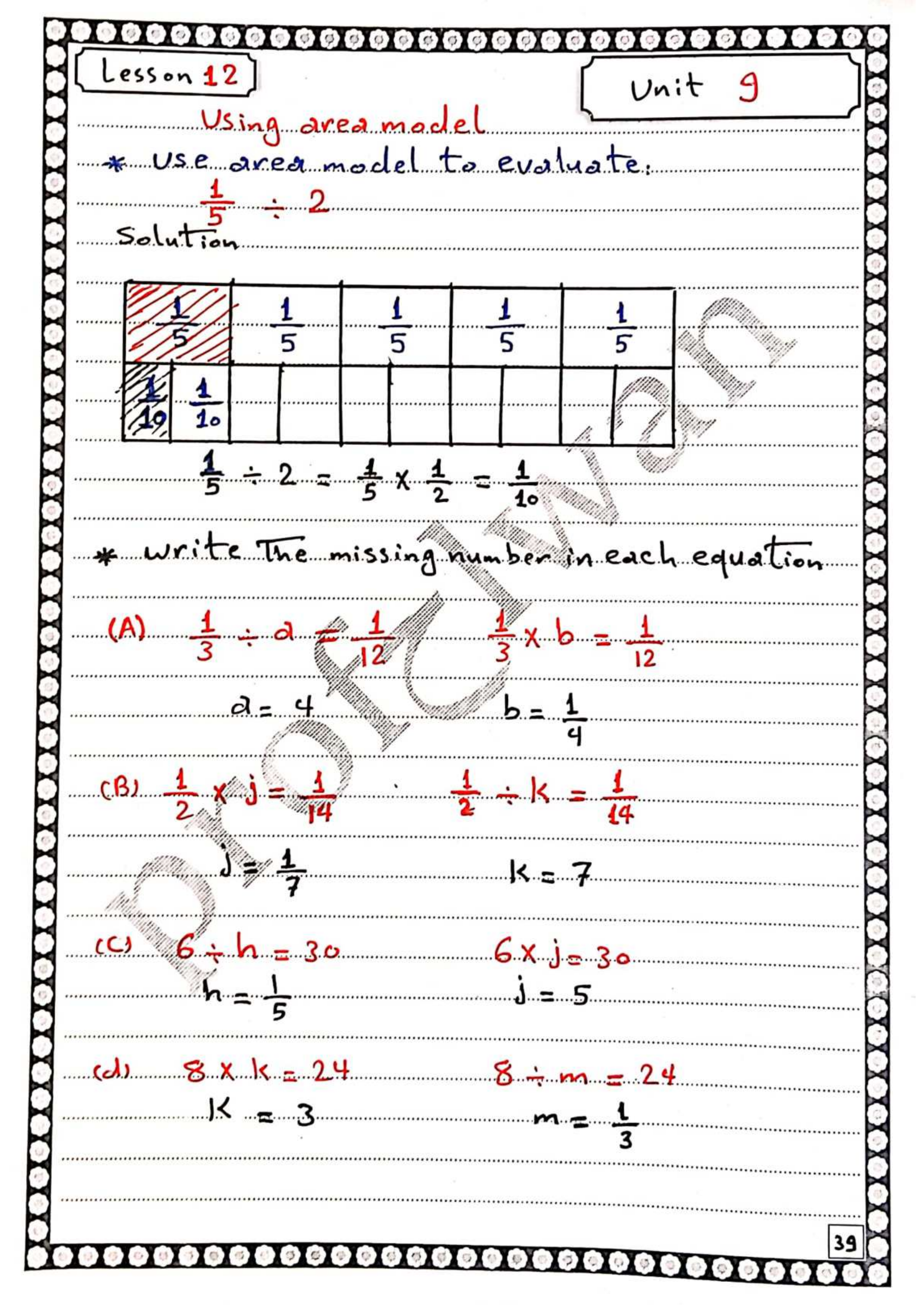
① سيب الأول زى ماهو
② نحول الـ ÷ إلى ×
③ و نقلب اللى بعديه
④ down down up up

$\frac{1}{5} \div 3$

$\frac{1}{5} \times \frac{1}{3} = \frac{1}{15}$

* Evaluate each of the following:

1. $\frac{1}{2} \div 10 = \frac{1}{2} \times \frac{1}{10} = \frac{1}{20}$
2. $\frac{1}{9} \div 8 = \frac{1}{9} \times \frac{1}{8} = \frac{1}{72}$
3. $16 \div \frac{1}{5} = 16 \times 5 = 80$
4. $100 \div \frac{1}{3} = 100 \times 3 = 300$
5. $15 \div \frac{1}{3} = 15 \times 3 = 45$
6. $9 \div \frac{1}{2} = 9 \times 2 = 18$



Lesson 12

Unit 9

Using area model

* Use area model to evaluate:

$\frac{1}{5} \div 2$

Solution

$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
$\frac{1}{10}$	$\frac{1}{10}$								

$\frac{1}{5} \div 2 = \frac{1}{5} \times \frac{1}{2} = \frac{1}{10}$

* Write The missing number in each equation

(A) $\frac{1}{3} \div a = \frac{1}{12}$ $\quad$ $\frac{1}{3} \times b = \frac{1}{12}$

$a = 4$ $\quad$ $b = \frac{1}{4}$

(B) $\frac{1}{2} \times j = \frac{1}{14}$ $\quad$ $\frac{1}{2} \div K = \frac{1}{14}$

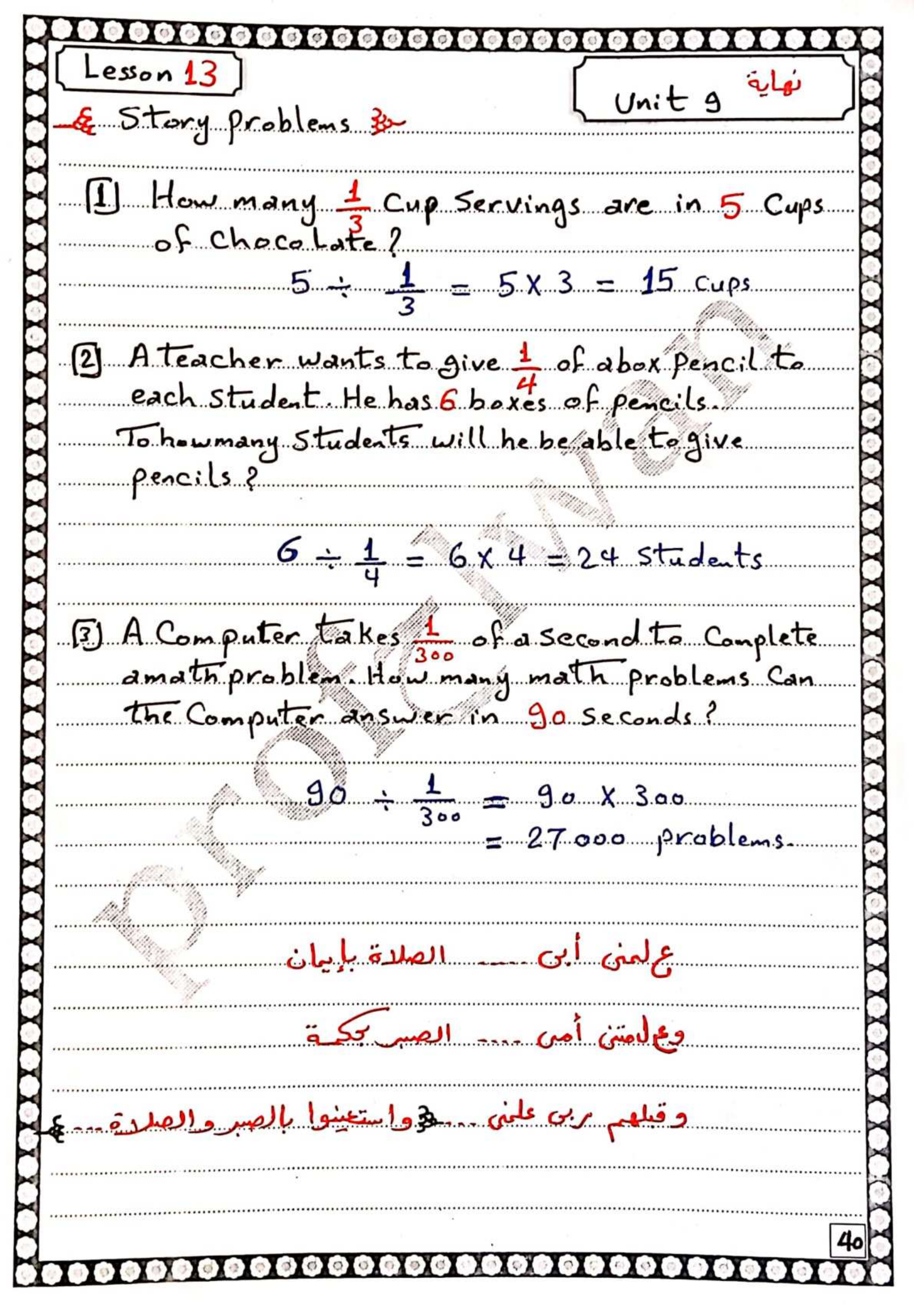
$j = \frac{1}{7}$ $\quad$ $K = 7$

(C) $6 \div h = 30$ $\quad$ $6 \times j = 30$

$h = \frac{1}{5}$ $\quad$ $j = 5$

(d) $8 \times K = 24$ $\quad$ $8 \div m = 24$

$K = 3$ $\quad$ $m = \frac{1}{3}$



Lesson 13

Unit 9 نهاية

Story problems

[1] How many $\frac{1}{3}$ Cup Servings are in 5 Cups of Chocolate?

$$5 \div \frac{1}{3} = 5 \times 3 = 15 \text{ cups}$$

[2] A teacher wants to give $\frac{1}{4}$ of a box pencil to each student. He has 6 boxes of pencils. To how many students will he be able to give pencils?

$$6 \div \frac{1}{4} = 6 \times 4 = 24 \text{ Students}$$

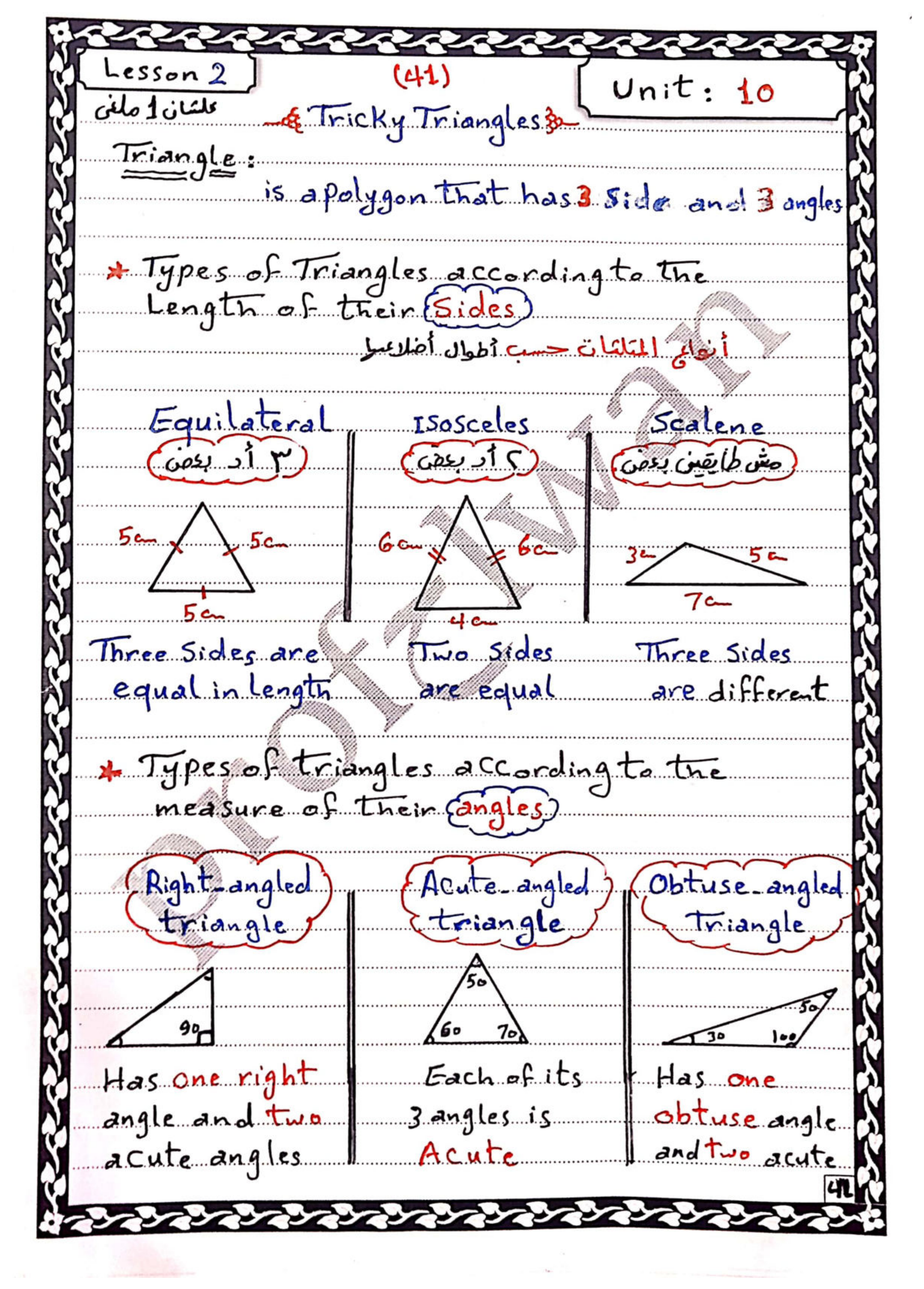
[3] A Computer takes $\frac{1}{300}$ of a second to Complete a math problem. How many math problems Can the Computer answer in 90 seconds?

$$90 \div \frac{1}{300} = 90 \times 300$$
$$= 27.000 \text{ problems.}$$

علمني أبي ..... الصلاة بإيمان

وعلمتني أمي .... الصبر بحكمة

وقبلهم ربي علمني ... واستعينوا بالصبر والصلاة ...



علشان 1 ملفى

Tricky Triangles

Triangle:
is a polygon that has 3 side and 3 angles

* Types of Triangles according to the Length of their Sides

أنواع المثلثات حسب أطوال أضلاعها

Equilateral	Isosceles	Scalene
٣ أد بعض	٢ أد بعض	مش طايقين بعض
5cm, 5cm, 5cm	6cm, 6cm, 4cm	3cm, 5cm, 7cm
Three Sides are equal in length	Two Sides are equal	Three Sides are different

* Types of triangles according to the measure of their angles

Right-angled triangle	Acute-angled triangle	Obtuse-angled Triangle
90	50, 60, 70	50, 30, 100
Has one right angle and two acute angles	Each of its 3 angles is Acute	Has one obtuse angle and two acute

ملحوظة كلبوظة

Any triangle has at least two acute angles

[1] Determine type of triangle :-

① $m(\angle E) = 30°$, $m(\angle F) = 90°$ and $m(\angle G) = 60°$

نشوف أكبر angle كام ؟! لو كانت

Obtuse ⟵ أكبر من 90° يبقى مثلث

Acute ⟵ أقل من 90° يبقى مثلث

Right ⟵ تساوى 90° يبقى مثلث

وعلشان أكبر angle هنا 90° يبقى مثلث

Right-angled triangle

② $m(\angle A) = 30°$, $m(\angle B) = 40°$, $m(\angle C) = 110°$

obtuse-angled triangle

③ $m(\angle X) = m(\angle Y) = 70°$, $m(\angle Z) = 40°$

Acute-angled triangle.

[2] Determine type of triangles according to their side lengths.

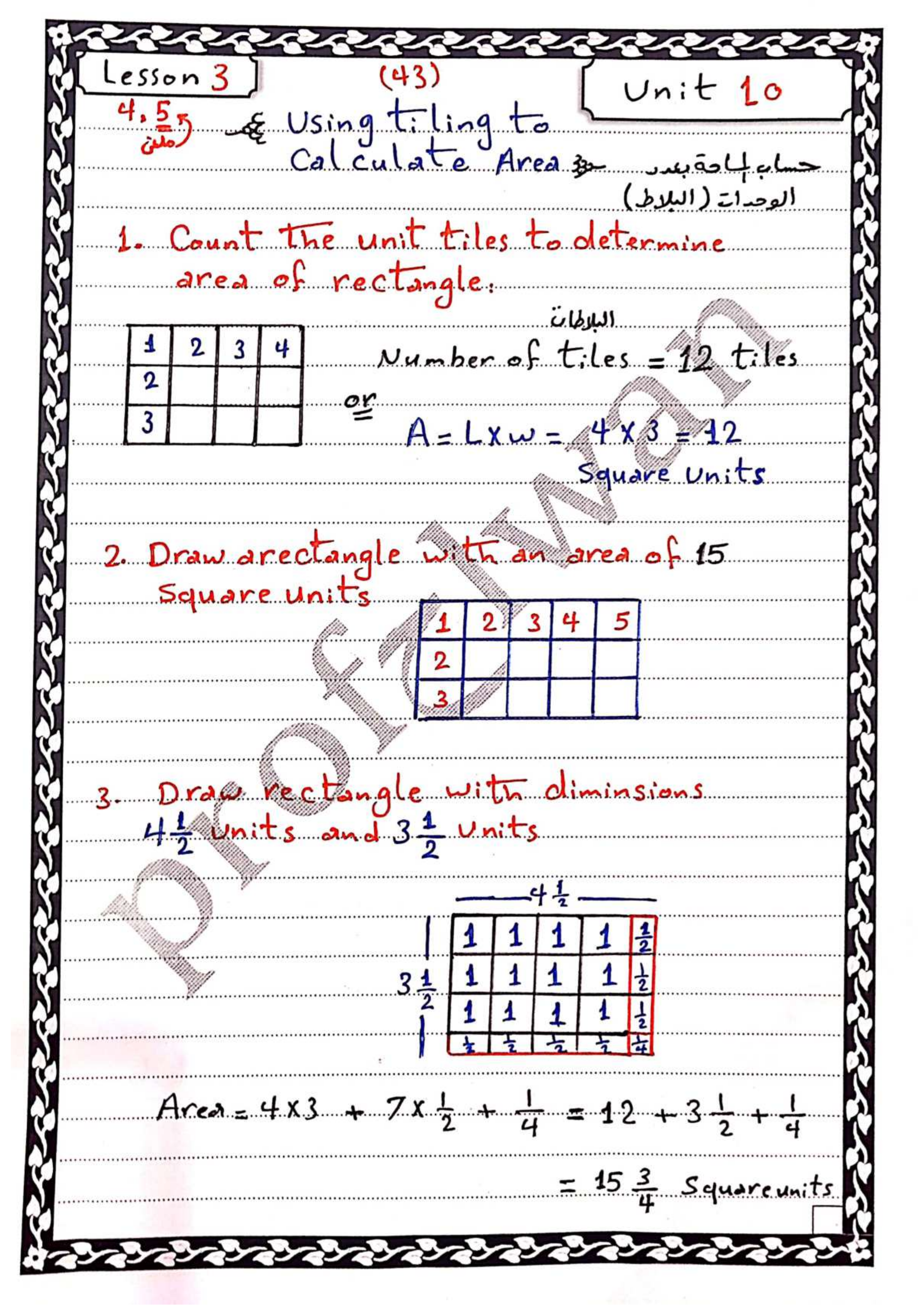
① $AB = 6.5$ cm , $BC = 7$ cm , $CA = 6.5$ cm

isosceles يبقى $AB = CA$ ٢ أد بعض

② $AB = BC = CD = 5$ cm equilateral

③ $XY = 10$ cm $YZ = 7$ cm $XZ = \frac{1}{2} XY$

Scalene مش طايقين بعض $XY = 5$ cm يبقى



Lesson 3 (43) Unit 10

4, 5 (متن)

Using tiling to Calculate Area

حساب المساحة بعدد الوحدات (البلاط)

1. Count the unit tiles to determine area of rectangle.

1	2	3	4
2			
3			

البلاطات

Number of tiles = 12 tiles

or

$A = L \times w = 4 \times 3 = 12$ Square units

2. Draw a rectangle with an area of 15 Square units

1	2	3	4	5
2				
3				

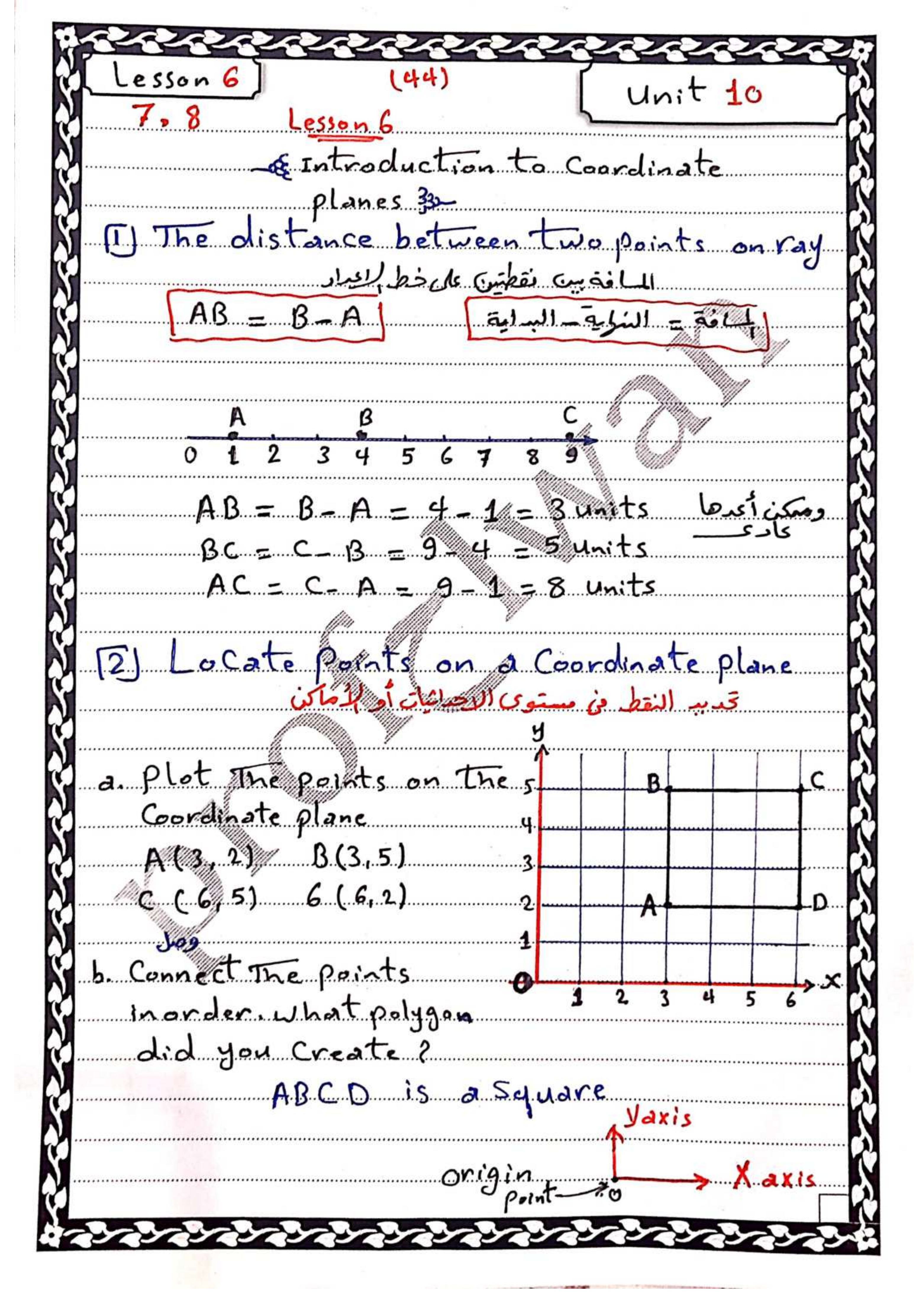
3. Draw rectangle with dimensions $4\frac{1}{2}$ units and $3\frac{1}{2}$ units

$4\frac{1}{2}$ (top side), $3\frac{1}{2}$ (left side)

1	1	1	1	$\frac{1}{2}$
1	1	1	1	$\frac{1}{2}$
1	1	1	1	$\frac{1}{2}$
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{4}$

$\text{Area} = 4 \times 3 + 7 \times \frac{1}{2} + \frac{1}{4} = 12 + 3\frac{1}{2} + \frac{1}{4}$

$= 15\frac{3}{4}$ Square units



7 , 8

Lesson 6

Introduction to Coordinate planes

[1] The distance between two points on ray

المسافة بين نقطتين على خط الأعداد

$AB = B - A$	المسافة = النهاية - البداية

Number line: A at 1, B at 4, C at 9 (0 1 2 3 4 5 6 7 8 9)

$AB = B - A = 4 - 1 = 3$ units

$BC = C - B = 9 - 4 = 5$ units

$AC = C - A = 9 - 1 = 8$ units

ومكن أعدها عادي

[2] Locate Points on a Coordinate plane

تحديد النقط فى مستوى الاحداثيات أو الأماكن

a. Plot the points on the Coordinate plane

A (3, 2) B (3, 5)

C (6, 5) D (6, 2)

وصل

b. Connect the points in order. what polygon did you create?

ABCD is a Square